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ARTICLE I.

THE DIFFERENTIAL DIAGNOSIS OF THE CAUSE OF SUDDEN UNCONSCIOUSNESS. By R. O. BEARD, M. D.

It is a matter of wonder that to a subject of such grave importance, as "The Differential Diagnosis of the Cause of Sudden Unconsciousness," so little distinctive attention has been paid, for though unconsciousness be but a *symptom* of diseased or perverted action, it is one of such vital consequence, often one of such imminent danger, that a fortunate or fatal issue frequently turns upon the pivot of the prompt diagnosis and intelligent care of the physician. Even granting that in any given case all idea of an immediately fatal tendency is eliminated,—supposing that the conditions point to nothing more serious than ordinary inebriation—it must not be forgotten that upon the doctor's diagnosis and the expression of his opinion may hinge not only his own reputation, but also the moral character of a, perhaps, hitherto innocent individual.

Mistakes of this nature have been made, even by reputable practitioners, and more than one victim has in consequence, suffered death in forced confinement, without care or treatment, and found vindication only in an autopsy which revealed an organic lesion as the cause, first of coma, and subsequently of decease.

The need of a careful study of the various causes productive of this phenomenon is thus prominent, because their differentiation is apt to be so obscure that physicians of undoubted ability have found themselves baffled.

In this paper I propose to consider only those conditions in which unconsciousness is of sudden occurrence, unattended by marked or continued prodromata, and sufficiently complete to render the patient incapable of furnishing subjective evidence or prior history. I shall endeavor to outline the distinctive symptoms observable in these cases and as the readiest means of studying these I shall append a summarized table which may prove of some diagnostic value.

The possibility of the co-existence of two or more diseases giving rise to this condition, or of the complication of disease with accident, or *vice versa* must always be born in mind. Apoplexy or sunstroke may supervene in a state of acute alcoholism; cerebral congestion or embolism may be accompanied by slight hæmorrhage. An apoplectic attack has been known to follow an epileptic seizure, and contusion, concussion and compression of the brain may be combined as results of severe injury.

Under the generic term of *Apoplexy*, a relic of the old-fashioned nomenclature, is grouped a class of cases almost involving coma, but with variations sufficiently distinct to indicate the differing seat and character of the causative lesion. These are, (1) cerebral congestion, (2) cerebral hæmorrhage and (3) meningeal hæmorrhage. In

CEREBRAL CONGESTION

unconsciousness is rarely of primary occurrence. It is usually preceded by general hyperæmic symptoms, and only in occasional cases is the initial evidence of disturbed function. Its distinctive features are: a partial paralysis, frequently bilateral but rarely, if ever, hemiplegic, contracted pupils with feeble reaction, temperature continuously higher than normal, respiration slow and

labored but lacking the stertor and peculiar expiratory puffing of the lips and cheeks observed in cerebral hæmorrhage, venous distention of the face and neck, and the comparatively rapid restoration of mental and muscular power.

This condition is not unfrequently superinduced by sunstroke or alcoholic stimulation, and if prolonged may end in serous effusion and death.

The existence or non-existence of hypertrophy of the heart, as an exciting cause, should be determined, and may serve as a valuable aid in diagnosis.

The opinion held by Trousseau that so-called apoplectiform congestion is always epileptic in character is certainly untenable, not only because many of the general symptoms are essentially different, but also because an epileptic attack in which coma is as prolonged as it is in many cases of cerebral congestion must constitute the graver form of the disease and must involve convulsions so pronounced as to render mistake impossible.

CEREBRAL HÆMORRHAGE

unlike the foregoing, is always marked by sudden unconsciousness. The probable age of the patient is a question valuable in diagnosis, as hæmorrhage rarely occurs before forty. The generally complete suspension of intellection, sensation, voluntary and reflex motion, the occurrence of true hemiplegia, the relaxation or paralysis of the sphincters, the stertorous and puffing character of the respiration, the varying temperature, the inequality and insensibility of the pupils, and the frequent lateral deviation of the eyes and head toward the non-paralyzed side, are its most important characteristics.

Those rare cases in which the *Pons Varolii* is the seat of hæmorrhage are most difficult of diagnosis, because the pupils are apt to be equally contracted, the respiration lacks the characteristic stertor, and paralysis is long delayed and often bi-facial. This condition is, in particular, closely simulated by opium narcosis.

MENINGEAL HÆMORRHAGE,

although of rare occurrence, is a distinct cause of sudden and profound coma. Its symptoms differ little from those of cerebral hæmorrhage.

A tendency to a remission and recurrence of the attack, the usual appearance of a general motor and sensory paralysis instead of hemiplegia, and the non-impairment of reflex action, are the only differential points we can observe, and whilst these may indicate an involvement of the meninges, it is not easy to determine whether the meningeal lesion is a primary one or whether it is consecutive to a cerebral hæmorrhage by process of invasion.

CEREBRAL EMBOLISM

is another usual cause of sudden unconsciousness. Although possible at any age, yet the *youth* of a patient attacked should be regarded as presumptive evidence in favor of an embolus as opposed to hæmorrhage. The existence of endocarditis or of a valvular heart lesion also offers good grounds for a suspicion of embolism.

A *right-sided* hemiplegia generally appears because the left middle cerebral artery is the usual seat of impaction. This, with a partial loss of sensation, and the general symptoms, as detailed in the summary appended, make up its destinctive features. Erlenmeyer may be quoted as authority for the stated normality of the pupils.

Recovery is usually not long delayed, and the paralysis disappears coincidently with the return of consciousness. A complete absence of paralysis and the occurrence of a variety of epileptiform convulsions have been reported in a few cases.

CEREBRITIS

would not require mention in this connection, but that some exceptional cases are on record, in which coma has been suddenly induced by the rupture of an abscess and escape of its contained pus into the cerebral substance. In these instances slight unilateral convulsions have been noted, and the appearance of the discharge through the auditory, nasal or orbital openings, and the general evidence of inflammatory action, are sufficient diagnostic signs.

SYNCOPE

is so familiar a condition that it is quite unnecessary to enter into its description. Its consideration here is only valuable on account of its relation to other causes of unconsciousness. It is in all

cases due to an arrest of function in the cerebral cortex through failure of its arterial blood supply, whether that failure is incident to a general or local anæmia, to sudden failure of the circulation, temporary arrest of the heart's action, or to extensive hæmorrhage from any source.

EPILEPSY

it is equally needless to describe in detail. Its symptoms are well-known, and in ordinary cases easily recognized. After the stage of convulsive action has passed, and coma has deepened, its recognition may, however, be more difficult.

The formerly livid countenance takes on a pale ashen hue; the pulse becomes feeble and irregular; temperature remains high—in some cases as high as 105° F.—the pupils contract, and frothy saliva, sometimes streaked with blood from the bitten tongue, is found upon the lips.

Paralysis is never proper to epilepsy, but it should be remembered that "a paroxysm of epilepsy *may* act as an exciting cause of an apoplectic seizure." A case of this kind is reported in a recent number of the *New York Medical Record.*

CATALEPSY

is the cause of a peculiar form of unconsciousness comparatively easy to differentiate.

Almost invariably peculiar to the female sex; paroxysmal in character; of uncertain duration and constant recurrence; and attended with remarkable muscular rigidity and contortion, it is little apt to offer any possibilities of error.

The feeble, but regular, pulse and respiration; normal temperature; dilated and sensitive pupils; open and tremulous eyelids; anæmic retina, are points worthy of remembrance.

CEREBRAL HYSTERIA,

in certain rare cases, is characterized by a sudden loss of consciousness, which may continue for several hours, with slight intervals. It is almost without exception confined to women. It is not accompanied by paralysis, and involves only a partial suspension of intellection, sensation and special sense. The patient can be momentarily aroused, but suffers an immediate relapse. There is little evidence of disturbance of the circulation or res-

piration. Consciousness is speedily restored on the application of the cold douche.

INSOLATION,

or sunstroke, although easy of recognition by means of the presence and prevalence of its exciting cause, is obscure in its pathology. It varies, of course, in duration and intensity. In certain cases cerebral hæmorrhage is induced, when paralysis and other symptoms proper to the latter appear.

The pulse always varies; the rapid and somewhat stertorous respiration is sometimes accompanied by a low moaning sound; the temperature ranges from 104° to 110° F.; the skin is peculiarly harsh and hot, and the pupils contracted and insensible. Vomiting and purging are dangerous symptoms.

URÆMIC POISONING

is a questionable cause of sudden unconsciousness, but certain cases are reported in which the usual prodromata are said to have passed unnoted, until the abrupt occurrence of convulsions and coma.

The convulsions are of the epileptiform type, and liable to remission. The presence of anasarca; the urinous odor of the breath; the dilated, indolent pupils; slow, stertorous respiration of a peculiarly labial character, distinguishable from the guttural sounds characteristic of cerebral hæmorrhage and compression; and the progressively falling temperature, reaching in some cases 91.5° F., furnish sufficient diagnostic evidence. If urinalysis is possible, the discovery of albumen and casts will settle the question of cause.

I cannot overlook the fact that a remarkable difference of opinion exists on the part of Professor Flint, as to the temperature of this condition. He claims that a marked elevation, sometimes ranging as high as 105° F., is observed in these cases. This statement is supported in Ziemssen's Cyclopœdia, where its explanation is attempted by a reference to the epileptiform nature of the convulsions, and the correspondingly high temperature of true epilepsy. But although *epileptiform*, the convulsions are not *epileptic*, and the analogy fails in view of the wide difference in both causes and effects of the two diseases.

Neither can the excessive muscular exertion thus induced be regarded as sufficient cause for this reported elevation. Considering the fact that all other toxic agents which induce coma, among which uræmic poison may properly be classed, invariably occur with *lower* temperature, the above statement appears still more doubtful. In the apparent absence of post-mortem facts to sustain the clinical evidence, I would venture to suggest the occasional occurrence of meningitis as a complication of uræmia, and a possible cause of high temperature, and hence of these conflicting observations.

ASPHXYIA

is properly ranked among comatose conditions of toxic origin, but is too familiar to need anything beyond mention in this connection.

It is well-defined as "a suspension of animation, due to the non-conversion of venous into arterial blood." The indications point to primary disturbance in the lungs rather than the brain.

ALCOHOLIC COMA

would appear, at first thought, to be of all forms of unconsciousness the most easily diagnosticated, and yet no other condition has been so fruitful of mistake, and of injury as the result of error.

A medical verdict of "intoxication" has too often consigned an innocent sufferer from far more serious ills to a course of treatment which involved either irretrievable physical mischief, or a form of moral injury equally impossible of repair.

The odor of alcohol thrown off by the lungs is a valuable aid to diagnosis, but even in the presence of this indisputable evidence of inebriation, it should be remembered that accident incurred while in a drunken state may cause concussion or compression of the brain, or that cerebral hæmorrhage may supervene in this condition. The absence of paralysis, the presence of a complete muscular relaxation and anæsthesia, and the state of the pulse, the respiration and the skin, are all worthy of note, but the condition of the temperature and the pupils furnish the most valuable and distinctive evidence. A low temperature, sometimes markedly low, is not absolutely peculiar to acute alcoholism, as opposed to other forms of unconsciousness, but in none, save that of uræmic poisoning, is there so frequent and so considerable a fall.

Dr. Wm. MacEwen, of Glasgow, Scotland, records a thermic test in fifty cases, noted under many varying circumstances, which shows a downward range of temperature from 97.9° to 93.4° F. These figures represent rectal temperatures, which, according to Wunderlich, should be reckoned from a half to one degree higher than in the axilla. It may therefore be stated that in alcoholic coma the temperature has a latitude of 5° below normal. The same observer claims the demonstration of an absolutely pathognomonic sign in the condition of the pupils, which, as far as my observation and inquiry have extended, has proved a reliable aid in the diagnosis of doubtful cases and the exclusion of any coincident injury or disease.

In alcololic coma *undisturbed*, he states that the pupils are *invariably contracted*, but that on the application of any external stimulus, sufficient to partially arouse the patient, they *at once dilate*, again relapsing into a contracted state as unconsciousness re-deepens. Dr. MacEwen reports the observation of fifty cases, of which number forty-eight answered perfectly to the test, contraction recurring in from five to thirty minutes after stimulation. The two exceptions to this rule proved, on subsequent inquiry, to have formerly suffered with disease of the iris, which had resulted in complete fixity of the pupils. Since the publication of these items I have endeavored, as opportunity offered, to test their accuracy, and in some eight cases I have noted, the behavior of the pupils has been in perfect accord with the facts stated. This alternation is, I believe, characteristic of no other comatose condition, and is therefore, if supported by further investigation, an invaluable diagnostic sign.

OPIUM NARCOSIS

is so rapidly fatal in its course that it especially demands prompt recognition. In the early stages of its action the patient can be momentarily aroused. The odor of opium on the breath can usually be detected. The complete muscular relaxation, the suppression of all secretions except that of the skin which is very profuse, the usually persistent vomiting, the markedly contracted and insensible pupils, and slightly reduced temperature, with other general symptoms, should be born in mind.

The symptoms attending the narcosis of other soporific poi-

sons are similar to the above. In the case of chloral, dilatation instead of contraction of the pupils is observed when poisoning results from the slow cumulative action of the drug.

In closing the discussion of these causes of sudden unconsciousness, let me refer briefly to those surgical conditions known as

CEREBRAL CONCUSSION, CONTUSION AND COMPRESSION.

Any attempt to differentiate their peculiar symptoms is necessarily limited by the fact that the occurrence of either of these distinctive forms of injury uncomplicated with one or both of the others is exceedingly rare. Indeed, Dr. Bryant explicitly stated that "consciousness and contusion of the brain are *always* associated in fatal cases," and the Reports of Guy's Hospital, London, for fifteen years, record "no case of death from concussion without change of brain structure."

Compression doubtless often happens alone. The possibility of an apoplectic or epileptic seizure occurring in a position likely to provoke a suspicion of accident, or even inducing a fall, should always be remembered.

Cerebral Concussion, pure and simple, is believed by many surgeons to be little more than a momentary disturbance, and certainly cases on record in which coma has persisted for hours or even days, can hardly be regarded as uncomplicated. The loss of consciousness resulting, is usually immediate and complete.

Cerebral Contusion, is defined to be "a sudden and violent attrition of the brain substance, attended with more or less laceration and effusion of blood," generally in the form of minute hæmorrhagic points. It does not necessarily involve injury, actual or apparent, to the calvaria. Its symptoms as apart from those of concussion and compression are not well differentiated.

Cerebral Compression, of traumatic origin, may depend upon the pressure of fragments of the outer or inner tables of the skull, or of a blood-clot formed beneath the seat of injury.

A short interval usually elapses between the infliction of the injury and the appearance of the profound unconsciousness which follows. The general identity of its symptoms with those attendant upon cerebral hæmorrhage in its idiopathic form, indicates that the results are substantially the same in the two cases.

For the general symptoms observable in these surgical cases, as well as in the other foregoing morbid conditions, I would refer to the summarized table appended to this sketch, which offers a readier means of rapid comparison than it would be possible to give in any other form.

It cannot but be observed that, in many cases, the means of differentiation we possess are at present very limited, and even those most clearly defined are often clouded by varying complications.

There only remains to allude briefly to the *modus operandi* of the causes which result in this general effect of unconsciousness, and on this important but obscure question I shall venture but a few simple suggestions.

The post-mortem evidence recorded throws but little light upon the working of these causes, but, applying the few facts thus obtained to the clinical history we possess, the indications seem to point strongly to *one* pathological condition necessary to the production of unconsciousness in any of its forms, viz.: a deficiency of arterial or oxygenated blood in the vessels of the brain. If this point be well taken, we have at once an explanation of the difficulty we meet in attempting to differentiate these conditions, in the fact that, though induced by exciting causes of widely varying nature, in many varying ways, and in greatly varying degree, the ultimate result, manifested in the loss of consciousness, is in each and all the same.

Thus, in syncope, probably the simplest form of unconsciousness, we find an anæmia of the cerebral cortex, whether caused by arrest of the general circulation, by profuse hæmorrhage from other parts, or by a chronic anæmic condition. In catalepsy and cerebral hysteria, the symptoms point to the same result, dependent upon deranged nervous function, probably manifesting itself through the vaso-motor system by inducing a tonic contraction of the cerebral arterioles. In concussion of the brain, the theory of vascular paralysis affecting the vessels of the cortical portion of the cerebrum and producing arterial anæmia, with consequent venous stasis, offers the best explanation of the phenomena observed; and seeing that we have no knowledge of the long continuance of such vascular paralysis, it accords well with the opinion that true concussion is but of short duration.

Insolation furnishes us with an instance of more complicated action, but it is probable, as Niemeyer observes, that the febrile condition of the blood, caused by the excessive heat and exposure, involves the loss of its oxygenating power.

Epilepsy has hitherto been very obscure in its pathology, but leading neurologists support the theory that the coma is due to general cerebral anæmia, while they refer the attendant convulsions to the excitation of a "convulsive center," by means of a local hyperæmia or congestion. This question doubtless requires further demonstration.

In the toxic conditions we have reviewed, we can distinctly trace the disturbance of cerebral function to the influence of the toxic agent, either directly upon the blood, as in uræmia and asphyxia; upon the heart and vessels through the agency of the nervous system, as in opium narcosis; or upon both, as in alcoholic intoxication.

By whatever mode of action, the results seem to be in each instance the same—that is, either the destruction or impairment of the oxygenating power of the blood, or an interference with the circulation in the cerebral substance.

In cerebral and meningeal hæmorrhage, and in traumatic compression, a similar end is reached by means of mere mechanical pressure.

Dr. Bryant observes that "unconsciousness in these cases, whether from injury or hæmorrhage, appears as soon as commencing intra-cerebral pressure impinges upon the capillaries of the cortex," and it is probable that it ensues even before that point is reached.

The rupture of an abscess into the brain substance has the same mechanical effect, and embolism, obstructing the cerebral arteries, induces partial pressure, and causes a more circumscribed anæmia, which, in its turn, accounts for the slighter and more transient symptoms.

The uncertainty which evidently surrounds this question in the minds of scientific observers, and leaves room for these imperfect suggestions, offers a wide field for patient investigation and research.

THE DIFFERENTIAL DIAGNOSIS OF

	CAUSES.	PULSE.	RESPIRATION.	TEMPERATURE.	PUPILS.
1	CEREBRAL CONGESTION.	Slow and full.	Slow and labored. *Not* stertorous.	Above normal.	Contracted with feeble reaction.
2	CEREBRAL HÆMORRHAGE.	Slow, full, often irregular.	Slow, labored and stertorous.	1. Below Normal. 2. Later regains normal. 3. Still later rises rapidly. (105–7°)	Variably unequal, insensible to light.
3	MENINGEAL HÆMORRHAGE.	Slow, full, and irregular.	Slow and stertorous.	Variable.	Variable, insensible to light.
4	CEREBRAL EMBOLISM.	Slow, weak and small.	Slow and full.	Slightly lowered.	Normal.
5	CEREBRITIS.	Rapid and irregular.	Shallow and irregular.	Higher than normal.	Unchanged.
6	SYNCOPE.	Rapid and thready or extinct.	Feeble and quiet.	Below Normal.	Dilated.
7	EPILEPSY.	Rapid, feeble and irregular.	Difficult, irregular, often gasping.	High to (105° F).	At first dilated, later contracted. Insensible to light.
8	CATALEPSY	Normal rate, but feeble.	Slow and regular.	Normal.	Dilated and very sensitive to light.
9	CEREBRAL HYSTERIA.	Small, feeble, but regular.	Rapid and quiet.	Normal.	Unchanged.
10	INSOLATION.	At first, slow and full. Later, rapid, feeble and frequent.	Rapid and slightly stertorous.	Very high. (104°-10° F.)	Contracted. Insensible to light.
11	URÆMIA.	Slow, feeble and irregular.	Slow and labored, with peculiar stertor.	Progressively lowered.	Dilated and indolent.
12	ASPHYXIA.	Slow and feeble.	Slow, feeble and gasping.	Lowered.	Variable, usually contracted.
13	ALCOHOLIC INTOXICATION.	Small, feeble and frequent.	Slow and labored. Sometimes stertor's.	Much lowered.	Contracted Dilate under stimulation and again relapse.
14	OPIUM NARCOSIS.	Small, feeble and irregular.	At first frequent. Later superficial and slow.	Normal or slightly lowered.	Much contracted, insensible to light.
15	CEREBRAL CONCUSSION.	Slow, feeble and intermittent.	Feeble, sighing or almost extinct.	Below normal.	Unequal React feebly
16	CEREBRAL CONTUSION.	Slow and feeble.	Slow but quiet.	Normal or Slightly elevated.	Contracted. Insensible to light.
17	CEREBRAL COMPRESSION.	Slow, soft and irregular.	Slow, labored and stertorous.	Variable, usually increased.	Dilated or unequal. Insensible to light.

CAUSES OF SUDDEN UNCONSCIOUSNESS.

MOTOR POWER.	INTELLECTION.	SENSATION.	SPECIAL SENSES.	COUNTENANCE.	MISCELLANEOUS.
Partial paralysis. Reflexes impaired.	Wholly or in part lost.	Impaired.	Partially impaired.	Flushed or Cyanosed	Venous distention of face and neck. Retinal engorgement
Hemiplegia. Reflex action abolished.	Completely suspended.	Entirely lost.	Impaired.	Variable.	Sphincters relaxed or paralyzed. Deglutition impaired. Ptosis frequent.
Paralysis more or less general. Reflexes unimpaired.	Suspended.	Anæsthesia accompanying paralysis.	Somewhat impaired.	Variable.	Sphincters relaxed. Vomiting usual.
Hemiplegia, usually right-sided. Reflex action normal.	Transiently suspended.	Partially lost.	Normal.	Pale.	
Muscular relaxation. Slight convulsions. Reflex action suspended.	Suspended.	Hyperæsthesia.	Unimpaired.	Variable.	General evidences of inflammation.
Muscles relaxed. Reflexes unimpaired	Suspended.	Impaired.	Impaired.	Very Pallid.	Cardiac and venous murmurs.
Convulsions. Reflex action somewhat impaired.	Suspended.	Lost.	Unimpaired.	Pale. Ashen hue.	Eyelids tremulous. Eyeballs prominent. Tongue bitten.
Muscular rigidity. Reflexes disturbed.	Suspended.	Impaired.	Partially Impaired.	Pallid.	Retinal anæmia. Eyelids tremulous.
Normal.	Partially Suspended.	Blunted.	Somewhat impaired.	Natural.	Spasmodic movements of eyes and eyelids.
Muscular relaxation. Reflex action feeble.	Completely Suspended.	Impaired.	Impaired.	Variable.	Skin harsh and hot Vomiting and purging.
Epileptiform convulsions. Reflex action feeble.	Suspended.	Impaired.	Impaired.	Pallid.	Anasarca. Urinous odor of breath. Albumen and casts in urine.
Convulsions. Reflex action impaired.	Suspended.	Impaired.	Disturbed.	Turgid.	
Muscular relaxation. Reflex movements suspended.	Suspended.	Complete Anæsthesia.	Impaired.	Variable.	Odor of alcohol on the breath.
Complete muscular relaxation. Reflexes abolished. Convulsions in morphia poisoning.	Suspended.	Impaired.	Impaired.	Pale and shrunken. Sometimes livid.	Odor of Opium on breath. Vomiting. Secretions arrested, except that of skin.
Muscles weak and flaccid. Reflexes impaired.	Suspended.	Entirely lost.	Act feebly.	Very pallid.	Surface cold. Vomiting frequent. Paralysis of bladder and sphincters.
Muscular rigidity. Slight facial spasms. Paralysis of eyelids. Reflexes impaired.	Suspended.	Impaired.	Impaired.	Pale	Sphincters relaxed.
Hemiplegia. Reflexes abolished.	Suspended.	Entirely lost.	In abeyance.	Very pale.	Deglutition impossible. Sphincters paralyzed. Retention of urine.

ARTICLE II.

BEMIS V. HAYES. By M. P. HATFIELD.

Mrs. Emeline A. Bemis v. Dr. P. S. Hayes. Action in trespass, for $10,000 *damages. Huszagh & Dunn for plaintiff. Heap & Mason for defendant.*

The history of the above case is so forcible an instance of the present legal status of the medical profession in Illinois, that it well deserves wider attention than it has yet obtained. The facts admitted by both parties to the suit are as follows:

Mrs. Bemis, a former patient of Dr. Hayes, applied to him for treatment July 15, 1879. She complained of frequent urination, headache, backache, bearing-down pains, and cessation of menses which she claimed had disappeared during her detention in the State Insane Asylum. A digital and speculum examination showed anteversion, subinvolution, and a left lateral laceration of the womb, for which Dr. Hayes used local and general treatment from July 15 to August 16—ten treatments in all—at the last of which he endeavored to replace the anteverted uterus by means of a rubber electrode used as a repositor. On the 17th, the next day, Mrs. Bemis rode some ten or twelve miles in a hack, and on the 19th suffered a miscarriage. On account of this Dr. Hayes was called on the 20th, removed a retained placenta, and after mutual recrimination, left her, telling her to summon another physician, if she needed further attention, as he would have nothing more to do with her, as she had willfully deceived him in reference to cohabitation with her husband.

After two years' unsuccessful efforts to compromise with Dr. Hayes, or to induce the district attorney to bring suit in her behalf, just before the case would have been barred by the statute of limitations, she at last found a lawyer who would undertake her case on the following counts, viz:

1st. Serious damages inflicted from a miscarriage brought about by Dr. Hayes' treatment.

2nd. Such treatment was the result of inexcusable ignorance on the part of Dr. Hayes, as Mrs. Bemis presented sufficient

proof of pregnancy (fourth month) to have contraindicated the treatment adopted, even if she had not called attention to the cessation of her menses.

3d. Still further injury inflicted by Dr. Hayes' unskillful treatment at the time of the miscarriage, and especially by his refusal to further attend her when she was in great peril from his malpractice.

Defendant's answers to these charges were:

1st. No proof that the miscarriage was produced by treatment rather than by long ride taken on subsequent day.

2nd. The treatment adopted was entirely proper, provided plaintiff's statements in regard to cohabitation with her husband were accepted as true; and there were no proofs of pregnancy except those otherwise explainable by the uterine lesions.

3d. No injury was inflicted by leaving plaintiff, as Dr. Hayes was entirely justified, under the circumstances, in doing, after the removal of the placenta; and that injury, if any, was done by her failing to summon another physician until the 25th.

The points at issue in this case were, first, in regard to the relative truthfulness of Bemis and Hayes in regard to statements made as to symptoms, menstruation, cohabitation, and subsequent statements; and second, as to the danger incurred in leaving a woman, after a four months' miscarriage, temporarily without medical care, and as to the ability of ordinarily skillful physicians to diagnose the existence of pregnancy of three and one-half or four months, in a case like Mrs. Bemis'.

The first of these questions is the only one that an ordinary jury is competent to pass an opinion upon without expert testimony. Drs. W. H. Byford, D. T. Nelson, J. Adams Allen, R. B. Treat, W. L. Marr, A. J. Baxter, C. C. Davis, J. S. Wickersham and P. S. Hayes were summoned as experts, and with remarkable uniformity testified that the treatment given to Mrs. Bemis was entirely proper, if she were not pregnant. That it was extremely difficult, if not impossible (except, by W. L. Marr, by methods which he would not reveal to the court) to certainly diagnose pregnancy before quickening, and that the subjective symptoms in Mrs. Bemis' case were referable to other

causes; and finally, that no serious injury was inflicted upon the plaintiff by leaving her as Dr. Hayes did.

Judge Williamson fairly charged the jury, that Mrs. Bemis' having paid, or failing to pay or promise to pay, in no wise debarred her from damages, if she had not received from the hands of Dr. Hayes such treatment as she ought from an ordinarily skillful physician; and, moreover, that damages, if any, ought to include recompense, not only for past and present injuries, but also for future disabilities arising from her present condition.

On the other hand, the present inquiry did not concern the general ability of the physician interested, but only the skill used at the times in question; but that if the treatment adopted was the result of untruthful statements made by the defendant, then she must be holden responsible for the results of such treatment.

With such instructions, a jury of medical men would have found a verdict for Dr. Hayes without leaving their seats; as it was, the jury disagreed. And why? Chiefly because, with the best of expert testimony, such a jury could not have the requisite knowledge for the just adjudication of such a case. A physician would hardly be willing to submit such a case to a jury of medical students; how much less to a jury who know absolutely nothing of medicine. A jury was originally made up of those who knew most about the case in question, but, according to the present system, one ignorant or bigoted juror can inflict a life-long injury upon the most upright practitioner. Cases like these are worse than "eating porridge with the devil" for the young physician, for he has everything to lose, and nothing but a heavy lawyer's bill to gain, with even the most favorable result. Take the present case, for instance. Mrs. Bemis' lawyers probably are poorer than if she had gained her case, but she is no whit the worse off than when she began. Dr. Hayes' account stands about as follows: *credits*—the satisfaction of having done a kindly deed to a supposed friendless charity patient; *debits*—two years' persecution and annoyance, loss of time and professional reputation, and several hundred dollars legal expenses; for all of which the law at present gives him absolutely no recompense. Any mali-

cious or designing patient, who can entrap a charitable physician into giving her his services may, on the flimsiest pretext, as in this case, bring an action in tort, or actually imprison the physician until the damages are paid in full.

And can there nothing be done to remedy this? Much, if there were concerted action on the part of the profession; but, as ever, everybody's business is nobody's, and the sufferer must look to his personal friends for assistance. Mrs. Bemis could not have brought suit for damages against the poorest saloon-keeper in Chicago, without finding that she had the whole liquor interest of the Northwest to contend against. It is the boast of Great Britain that the weakest one who bears the name of an English subject, is protected by the whole strength of England, and so it ought to be with our profession. Who will tell us how it can best be done?

EXTERNAL HÆMORRHOIDS.—Dr. Blaschko, of Berlin, recommends compresses soaked in a one per cent. solution of ergotin, to be applied hourly. Dr. Pasqua, of Florence, gives the following ointment as infallible.

Extr. of belladonna.....gr. v.
Iodoform.....
Acetate of lead... .....aa gr. i.
Petroleum jelly.....℥ i

Make into an ointment, to be applied three or four times a day.—*Druggists' Circular.*

PROLIFIC.—The 20th of December, 1881, I attended a lady of twenty years in her first confinement, who is next to the oldest of sixteen children (seven sons and nine daughters) ten of whom are still living. The father is now forty-one and the mother forty; both well and hearty. They were eighteen and nineteen respectively when married. All were single births and full term children. They live in New York State.—*A. H. Foster.*

Society Reports.

ARTICLE III.

AMERICAN MEDICAL ASSOCIATION. Thirty-third Annual Meeting, held in St. Paul, Minnesota, June 6, 7, 8 and 9, 1882. (Special Report to the CHICAGO MEDICAL JOURNAL AND EXAMINER.)

First day, Tuesday, June 6, 11 A. M. First Vice-President P. O. Hooper, M.D., in the Chair.

After prayer had been offered by Rt. Rev. Bishop John Ireland, Dr. A. J. Stone extended the greeting of the Northwest to the delegates and members of the American Medical Association, and introduced Gov. Hubbard.

The Governor welcomed the members of the society in the name of the State. "The people of Minnesota feel highly honored to find so many distinguished physicians in their midst," said he, and in extending their greetings, he would assure the Association that if the people of Minnesota had faults, theirs was not a lack of hospitality. While he regarded the delegates' visit as highly complimentary and advantageous to the place, he believed that they would not limit their time to the fulfillment of their duties, but that they would avail themselves of the opportunity to investigate the country, note the various characteristics—as the invigorating air and regenerating climate of Minnesota—and widen the reputation of its people on their return. Said the Governor, "We invite the brain and the muscle of the world to our country." However, it was not his duty on the present occasion to show the beauty of his State; "let the meeting be the means of elevating the proud profession which you represent."

Dr. Stone then introduced some of the prominent delegates present: Drs. L. A. Sayre, of New York; N. S. Davis, of Chicago; J. M. Toner, of Washington, etc.

Several protests had been sent from various State medical societies against the action lately taken by the New York State Medical Society in revising their code of ethics. A part of these were read by the chairman, when the protest was declared unanimous. These, together with protests against a few delegates being recognized, were referred to the judicial council. Letters from the President, Dr. Woodward, now in Europe; from Dr. Sam. D. Gross, of Philadelphia, and Dr. H. D. Holton, of Brattleboro, Vt., were read, expressing their regrets that they could not be present at this meeting.

Dr. P. O. Hooper, of Little Rock, Arkansas, Vice-President of the association, and acting President of the present meeting, next read his opening address.

After a few introductory remarks, he said that the society would strive to give every one the advantage of a free hearing, and free discussion. He returned thanks to the citizens of St. Paul for their hospitality, and said that the beauty of the country had surprised every one.

A generation had now passed away since the foundation of the American Medical Association. But though most of the founders were gone forever, a few remained, and there was one among those present who had been more concerned than any other in its foundation, and without whose efforts the present meeting had never been possible.

We could now throw a retrospective glance, and look over the harmony with which the Association had been maintained. In that long period of thirty-three years, superstitions had disappeared; science had pushed its investigations in every direction. Inventions of every description had been made; so that now continents were united together. Our homes were lighted by electricity; the oceans were the channels through which flowed the commerce of the world. Moral and mental philosophy had made great strides since the time of Newton, and greater rewards had been met by modern workers. Prophets are not now without honor in their country.

New theories had been formed, and new discoveries made. The testimony of the rocks, of the sea, and of the air had been brought to confirm them, and water, steam, and electricity had been made use of in a thousand manners. All this during the life-time of the Association. The latter's purposes, however, had been to cultivate medical knowledge and progress, and in those it had kept apace with the advance of sciences. It had been liberal in its discussions, and its portals had been freely open to the worthy.

Certainly the Association had been a powerful means of promoting various sciences, but it required time, labor, and united effort to carry it out.

When the Association was founded there was no code; the medical literature of the country was in its infancy; there were few books on medicine; but since, medical societies have been founded in every State, until the American Medical Association occupied a position, prominent not only among philosophical societies, but the grandest associations in the world.

The transactions published every year had been a steady record of progress. The Association had been a specially potent factor in raising the standard of medical education, through the American Association of Medical Colleges.

A great deal had been done also in the line of scientific discoveries and achievements, which result had been appreciated in Europe as well.

A special inquisitiveness had been the characteristic of its members. Their summons had been to conquer disease, and help mankind, and in that direction had not been surpassed by any other society.

The speaker sincerely hoped that the committee in charge of the New York State Society dissention would bring the matter to an amicable settlement.

Attention to public hygiene, and to the formation of State boards of health had been the special aim of the society, which also regarded the National Board of Health as a result of their repeated efforts.

An interesting fact had attracted the Vice-President's attention, and there should be no occasion for the excessive mortality from

small pox. Vaccination had been long recognized as an efficient means against that disease, and he was in favor of enforcing it on the people through the country. He was persuaded that the raging of variola was owing to neglect and ignorance on the part of some people.

There was the objection that such legislation interfered with personal rights. But personal rights were often interfered with, that is, whenever a greater benefit accrued to the community from such legislation.

Said the Vice-President: "We have, gentlemen, a Code of Medical Ethics in force in every State of the Union, and it was too late for any individual society to reject it. It was one of the results of the Association to have perfected that code, and one mistake would involve us in a world of inconsistencies, and no article should be thus tampered with.

A spirit of liberalism had always prevailed in the society, and he would not declare that no radical change would ever be inaugurated, but until such an arrangement appeared necessary to the society, we should go by the old rule. Of the twenty-three Presidents who had succeeded one another in the Association, only 13 were yet alive, and the last one, Dr. Hogden, of Philadelphia, lately deceased, had acquired a prominent place among the eminent men of his time.

"We, too, must soon yield our places to younger men," but they should know what weight will rest on their shoulders, and the Vice-President wished to be pardoned when he encouraged them to enter the field with *the zeal* of the founders of the Association. He recommended a jealous regard for the honor of the society, and a fit performance of the work fallen to their share.

A vote of thanks was returned by the members to the Vice-President, and his paper was referred for publication.

It was also resolved that the members of the Minnesota State Medical Society, then in session, should be made members of the American Association by invitation.

Then followed a reading of the names of delegates and mem bers present.

JUNE 6TH—AFTERNOON SESSION.

Section on State Medicine and Medical Jurisprudence. Dr. A. L. Gihon, U. S. N., chairman.

In answer to a circular from the chairman asking for information regarding medical progress, legislation, and vital statistics, reports had been forwarded from twenty two States. These reports contained a large amount of material which he had reviewed and extracted in order to present it to the members. It was laid on the table.

A communication from the Wayne County Medical Society, Indiana, was brought before the meeting. It proposed the supervision of "vaccine farms" by the National Board of Health. There seemed to have been a good deal of adulteration of the virus furnished to the trade, and death had resulted in a few cases where it was referred to the use of such impure lymph.

Dr. Haine believed that too much was asked of the general government that ought to be done by private effort. The fact that the National Board of Health would have the supervision of the vaccine farms was not a guaranty to the people that the virus would be pure. Perhaps a better plan would be to let the local Medical Societies undertake such overseeing. Or let the producers have their own supervisors, as some of them have already. Or let the producers form an association and pledge themselves to furnish reliable material. The members were divided between these resolutions, and the communication was laid on the table also.

SUICIDE IN THE CITY AND COUNTY OF PHILADELPHIA DURING THE PAST DECADE.

Dr. John G. Lee, coroner's physician of Philadelphia, read a paper with the above title. The subject had received a great deal of attention in Europe since the investigations made by Esquirol and others, but only a few authors had treated it in this country. That had been the incentive which led him to make the present researches, and he hoped that many others would accumulate statistics which would be of great value in the future.

From 1872 to 1881, inclusive, out of 12,936 cases of coroners' inquests in Philadelphia, there had been 636 suicides; 526

males and 110 females. However, these numbers were not entirely exact, for some cases of suicide must have been reported as accidental, and *vice versa*, obviously.

According to his observations, suicides increased in a locality as the population grew denser. As to color, they seemed infrequent in the black race; there being only eight cases in all. There were nearly five male to one female suicide.

The desire for self-destruction was not often manifest before the age of puberty. It was most frequent in males between the ages of thirty and forty, but in females between the ages of twenty and thirty.

In contravention to the results of European observers, he had found that suicide was not so common with the single as with the married; this the writer referred to the fact that in Philadelphia, people generally marry between the age of 20 and 25, while suicide is common at a much later age, as seen above. However, he would be guarded in his conclusions, as the material at hand was very incomplete, and he did not believe that any conclusion of real value could be formed from that. Weather records showed that a high temperature, with a low barometric pressure, were generally accompanied by an increase of self-destruction, which was also of greater frequency in the spring and the autumn. Deaths from all causes were more frequent in summer. It seemed that suicide sometimes followed a debauch, at the end of the month, after the victim had received his wages and spent them all at once; or in other cases, where many debts should have been paid. Of the number above stated, there had been 141 suicides by hanging; 122 by shooting; 96 by laudanum; 83 by cutting the throat; 57 by drowning; 27 by narcotic poisons; the rest had happened in a variety of ways. Of the 636 cases, 212 were born here; 241 in foreign countries; and 188 had not been ascertained. Hanging remained a very popular mode of death, perhaps from the supposed lack of suffering which it affords. Shooting was also a very common means in this country, where so many carry firearms. Drowning and hanging were especially frequent among the Irish, although suicides on the whole were not common among them.

Suicide, which used to be considered a crime, was not always

regarded as such since the rights of man had been declared. It has never been made a crime in Philadelphia. Two hundred and twenty-eight cases had been reported as caused by insanity; generally temporary aberration. No doubt Christian charity often dictated such verdicts, but more statistics are needed in this also. The causes leading to self-destruction must be various; temperament, sociological relations, and many others. It was far from being the truth that suicides generally depended on unsoundness of the mind, except if we grant what some specialists claim, that the majority of mankind are unsound in mind. But the impulse to suicide was often impetuous, though sometimes done with a rational purpose in view, as when the victim intended to leave a life insurance to his family in need. Although there were suicides in all classes of the community, poverty was a potent factor.

The suicides themselves were often anæmic and poorly fed, so that the occurrence was in ratio to the price of food. In the writer's opinion, suicide was not on the increase, everything considered. It was rather a wonder that it was not more frequent in these days of destruction and reconstruction of societies, with the roads behind us strewed with forgotten creeds and spurious dogmas.

Motions were carried to refer the paper to the Committee on Publication.

Section on Practical Medicine, Materia Medica, and Physiology. G. A. Octerlony, M.D, Louisville, Chairman.

HOME TREATMENT OF PULMONARY CONSUMPTION, by general and Local Antisepsis on the Basis of Strict Individualization.

Dr. J. Hilgard Tyndale said that phthisis consisted of a destructive process in the lungs themselves, and a general septicæmia. The treatment advocated by him consisted in a local antiseptic medication of the lung, and antiseptic treatment of the general lesions, and a reinforcing of the digestion and assimilation, in order to renew the blood of the patient. He believed in changing more or less frequently the antiseptic agent used, when it seemed to lack efficiency, and on the principle that changing remedies of the same class enhances their therapeutical value.

He also altered the mode of introducing drugs, in order to prevent a local irritation of the mucous membrane, and to increase the benefit of the medication also.

THERAPEUTIC ACTION OF CHLORATE OF POTASSIUM.

Dr. John V. Schoemaker, editor of the *Medical Bulletin*, of Philadelphia, read the above paper.

This powerful and energetic drug had been discovered about the end of the last century by Berthollet, and was used with the idea that it might transmit some of its oxygen to the system. It was at first recommended as a preventive of scurvy, and Chaussier proposed its use in croup. After the remedy had almost fallen into oblivion, it was reinstated by Dr. Blanche in 1847. Dr. Shoemaker had obtained marked benefits from its internal use in scrofulous skin diseases; Dr. M. Landesberg, of Philadelphia, had also reported good results from its application to epithelioma of the eyelids. As to its physiological action, the doctor remarked that its effects seemed to be largely due to the great amount of oxygen which it contained, and it was therefore looked upon as a potent agent in the treatment and cure of all diseases in which there was sub-oxidation, or a deficiency in nutrition, secretion, excretion, aëration, and molecular change. He believed that it acted in some hitherto unexplained manner, changing the character of the blood in disease, and overcoming pathological actions. Speaking of its local application, he said that the utility of solutions of this salt used as a gargle in the treatment and cure of mercurialism was universally admitted. He used it in the proportion of one drachm to a glassful of water, as a gargle in different varieties of stomatitis. Also in inflammation and ulceration of the throat. Sometimes it seemed more efficient when used alone, at others, in combination with astringents.

Used as a gargle, or applied with a brush, or by atomization, it had been beneficial in chronic catarrh of the larynx, and of the posterior nares. In diphtheria and in phthisis he used a gargle of one to two drams to eight ounces of water; of ten grains to the ounce, in subacute or chronic otorrhœa; of ℥j to Oj, in ozæna. An injection of ℥j to a quart in leucorrhœa often proved

beneficial. In gonorrhœa, gr. x to ℥j often produced an alterative action, and arrested the discharge.

It had been recommended in chronic dysentery for an injection, ℥j to ℥j. It was useful in chancroids, in solution, or dry; also in obstinate chronic ulceration, gangrenous sores, and pustular exzema. The greatest benefit experienced from its use, however, was obtained in diphtheria and croup, where it should be given in doses of from five to thirty grains three or four times daily.

In the marasmus of children small doses were useful. In anæmia, it improved the digestive tract.

In the eruptive fevers, scarlatina, measles, rotheln, and erysipelas, it brought out the eruption. It was most valuable in various diseases of the skin, ecthyma, boils, carbuncles, styes, pustular acne, eczema, sycosis. It lessens suppuration. It was also an efficient medicine in scurvy, influenza, yellow fever, rheumatism, cyanosis, hæmorrhagic diathesis, dropsy, syphilis, etc. When small doses were given they worked better before meals, large doses after.

Dr. Shoemaker generally began with small doses and increased them till its physiological action became manifest. The weak bear the largest doses. Paper was referred for publication.

Section on Surgery and Anatomy. Dr. W. A. Byrd, of Quincy, Ill., Chairman.

LAPAROTOMY,

By Dr. Wm. Hill, Bloomington, Ill. The chairman read this paper, the author being absent.

Dr. Hill believes that he was the first to inaugurate laparotomy. He had performed the operation in 1855 on a patient who showed obstruction of the bowels after eating unripe peaches. Anodynes, hot fomentations and cathartics had failed to relieve him, and on the third day a lump, the size of a hen's egg, appeared in the right iliac region. The case was diagnosticated an invagination of the ileum within the cœcum, necessitating surgical interference. Chloroform was administered, the peritoneum opened, and the occluding substance was pressed past the invagination. The wound was shut with hare-lip sutures, and united by first intention. A slight amount of peritonitis took place and the patient made a good recovery four weeks later. Since that time

the doctor had several times met other cases of that nature where the patient died; his proposals of interference had always met a strong opposition from the profession.

DISCUSSION.

Dr. Peck, of Davenport, related a case of the same kind. The patient was on the way to recovery.

Dr. Chas. Parkes said that three difficulties arose in such cases. First, the fear on the part of the surgeon to interfere with the peritoneum; second, the difficulty of localizing the site of the trouble; third, the difficulty in ascertaining the time to make the operation. He related the case of a boy who fell on a picket fence, his bowels being made to protrude, together with the peritoneum, from the points of entrance and exit of the picket. There was no rise in temperature, no peritonitis, and the patient made a good recovery.

A paper on Anchylosis of the Hip-Joint, by Dr. Charles C. F. Gay, was read, and one on A New Truss, to be Applied after the Radical Cure of Hernia, by Dr. Jos. H. Warren, of Boston.

Second day—Wednesday, June 7, 1882. 10 A. M.

Report of Committee of Arrangement.

Committee on Nominations consisted of the following:

Arkansas, Dr. L. J. Dibrell; Colorado, Dr. J. Hawes; California, Dr. Orme; Connecticut, Dr. W. E. Brownson; Dakota, Dr. S. B. McGlumphy; Dist. of Columbia, Dr. W. D. Marmion; Georgia, Dr. W. F. Holt; Illinois, Dr. T. F. Worrell; Indiana, Dr. W. Lomax; Iowa, Dr. T. J. Caldwell; Kansas, Dr. J. Bell; Kentucky, Dr. L. S. McMurtry; Louisiana, Dr. J. W. Dupree; Maryland, Dr. W. Lee; Michigan, Dr. F. Pratt; Massachusetts, Dr. M. C. Parker; Minnesota, Dr. W. W. Mayo; Maine, Dr. T. A. Foster; Missouri, Dr. A. J. Steele; Mississippi, Dr. H. A. Grant; Nebraska, Dr. L. J. Abbott; North Carolina, Dr. E. Grissom; New York, Dr. N. C. Husted; New Jersey, Dr. S. S. Clark; Ohio, Dr. J. C. Scott; Pennsylvania, Dr. X. Fricke; Rhode Island, Dr. A. Callon; Tennessee, Dr. J. B. Lindsley; Texas, Dr. U. N. Park; Virginia, Dr. F. D. Cunningham; Vermont, Dr. S. W. Thayer; Wisconsin, Dr. N. Senn; U S.

Army, Dr. Perrin; U. S. Navy, Dr. Jn. M. Brown; U. S. Marine Hospital, Dr. O. W. Miller.

Dr. J. H. Packard, of Philadelphia, read the report of the committee on journalizing the transactions of the American Medical Association, of which he was the chairman.

It had been calculated that the yearly expenses of such a journal would reach $13,000 or $15,000 yearly, while the income of the association, at most, did not exceed $6,000 yearly. It was proposed that members of the association paying $5 membership fee should receive a copy of the journal, which would be forwarded to outside subscribers for $6 a year. It was also proposed that all members of local societies be made members of the association. A revision of the by-laws, a few years ago, having stated that membership should not be forfeited for non-payment of dues till the third year, some members had supposed that all they needed was to pay $5 in three years; while it was $15. It was supposed that there were 90,000 practicing physicians in this country, of whom at least 50,000 must be regular. 3,000 subscribers would be all that was necessary to carry on the new journal. It might be published by some reliable publishers, and a salaried editor. The association would need a charter, which could be obtained from any State legislature. A board of nine trustees were proposed, to be renewed, one third, every year, by the association, to take care of that matter. An editor might be appointed by the association for an unlimited time, to be replaced only by a vote of three-fourths of the members. His salary might be fixed at $6,000 a year, this including the salary of sub-editors, which he would have permission to choose. It should be published in a central place, if possible, and its title would be *The Journal of the American Medical Association*. A circular might be sent immediately to every physician in the country, in order to find out how many subscribers could be secured.

The report was accepted, and a motion passed to have copies of it distributed to the delegates the next day.

Dr. Goodwillie's motion that members present, though not delegates, have the right to vote, provoked much discussion.

Dr. Beach, of Ohio, asked the passage of the amendment by acclamation.

Dr. N. S. Davis said he did not wish to oppose the amendment if it was the desire of the majority of the delegates to pass it. He had attended all the meetings held in the past, though seldom in the quality of delegate. Every member present was expected to be a member of some local society, and, if not sent as delegate, must be represented through his society by some delegate. Would not the motion deter members from organizing and maintaining local societies, and cause the disintegration of those already existing? But the integrity and success of the American Association rested on the societies at home. Its organization had been the signal for all local societies to revive, since they were to be represented in it. The local must be in affiliation with the State, and the State with the National Association. For his own part, he had often given his privileges as delegate to some younger man. He considered that he voted through him.

The amendment was laid on the table.

Address by the chairman of Section on Practice of Medicine, Materia Medica, and Physiology. Dr. J. A. Octerlony, of Louisville, Ky.

The chairman said that labor, in medicine, had not been in a circle, but in progression. That it had advanced steadily with modern philosophy. New names had been invented to express new ideas which would not be understood by men who died twenty-five years ago. A short retrospective glance was sufficient to show what immense progress had taken place. Even in the middle of the eighteenth century measles were not discriminated from scarlet fever, Up to 1829, when Bright investigated diseases of the kidneys, nothing was known in that direction. Yet the literature he had written had only been the means to deeper researches and actual progress.

Before 1840, the very name of endocarditis was unknown. The valvular lesions, so apt to complicate acute rheumatism, had not yet been found. Exophthalmic goitre had been investigated first by Graves, of Dublin, in 1835, while it was not till 1855 that Dr. Addison discovered the pathological change which takes place in the supra-renal capsules in the dis-

ease called after him. A mere enumeration of single facts would fill up a volume.

Were one to pass in review the names of great men, it would be found that a great many had belonged to the medical profession. What the law of gravitation had done for astronomy and the law of chemical affinity for chemistry, he expected some discovery would soon happen which would do the same for medicine, in the near future. But a great deal of discrepancy existed in the profession, skepticism, which had invaded all departments of human knowledge was nowhere so marked as in medicine. It seemed strange to the human intellect that after heat, light, electricity and water had been made to serve man's desires, that he could not likewise conquer disease. But a lack of learning was not infrequent in physicians, and the number of failures among them were in ratio to their lack of knowledge. As yet we had to rely on clinical experience as our main means of curing disease. What we were able to do largely depended on what our predecessors had done; and the profession partook of the discoveries and honored a host of great unknown which had worked in its ranks. Genuine work was never lost. In reviewing the present state of medical sciences, the host of theories now brought out, though so often ephemeral, showed the activity of medical brains. Inflammation was presently regarded as almost a physiological action; a process of increased local nutrition, hastening repair. The pathology of the nervous system, so long a *terra incognita*, had now been explored, and the true nature of hyperæmia, of locomotor ataxia, and of other affections, been investigated.

It was exceedingly probably that before a long while, lesions of the brain would be as easily located as those of the heart. Phthisis was no longer regarded as an incurable disease. And its duration had been doubled under proper management, among which, pneumatic apparatuses, and especially a good training in youth, were most important. The formation of urea, it had been lately discovered, was connected with the liver, and that would throw light on enlargement and diseases of that organ. Washing the stomach was a very promising procedure. Renal pathology was also making rapid strides. Da Costa had lately traced the

origin of Bright's disease to lesion of the abdominal sympathetic.

The microscope had been of special benefit in many modern discoveries. The infectious diseases by its means had been traced to the actions of parasites. Thus Eklund, of Norway, had found that lepra depended on a micrococcus; the same was true of typhoid fever. Scarlatina also depended on a parasite, while H. C. Wood had found that diphtheria had a similar origin.

Malarial diseases had been shown by Tomassi Crudeli, in 1879, to depend on a vegetable parasite, which reproduced the disease when injected into the lower animals.

Helminthology was but a recent branch of medicine. It was only in 1860 that trichinæ were found to cause epidemics of a dreadful disease, and hydatids had been investigated in 1821 for the first time. Innumerable other discoveries could never have been made without microscopes. Contrasted with these, those physicians who practiced any exclusive dogma, all irregulars, had remained in absolute inertia. Not a single original communication had ever been made by them to anatomy, physiology, pathology, gynecology, chemistry, hygiene or surgery. He expected that, in the near future, medicine would be an exact science.

NO ADMITTANCE FOR NEW YORK DELEGATES.

In regard to the protest against the receiving of delegates from the New York State Medical Society, which was referred to us, the judicial council decide as follows:

Having carefully examined the code of ethics adopted by the New York State Medical Society at its annual meeting in February, 1882, as furnished us by the secretary of said society, the judicial council find in said code provisions essentially differing from and in conflict with the code of ethics of this association, and therefore, in accordance with provision of rule 9 of the by-laws of this association, decide unanimously that the said New York Society is not entitled to delegates in the American Medical Asssciation.

ADDRESS BY THE CHAIRMAN OF SECTION ON OBSTETRICS AND DISEASES OF WOMEN. By Dr. H. O. Marcy, of Boston.

A careful examination of uterine tumors with the microscope showed that they consisted of muscular fibers, and were properly

myoma, surrounded by connective tissue of a loose texture, but never much increased. This view agreed somewhat with that of Virchow, while Billroth speaks of them in this loose manner: "These tumors appear to the naked eye as connective tissue, but might be classed with myomata." (A number of admirable microscopical preparations were thrown on a screen, which showed sections of tumors in which the connective tissue was rare, and hardly any vessels were present in the interior of the tumors. A capsule had formed around all of them, which had grown to a certain size).

Dr. Marcy declared ergot of no benefit in most of those cases. He commented on Battey's operation, and, according to the results obtained by Tait, removal of the ovaries and the Fallopian tubes was a successful treatment of uterine fibroids, but the percentage of those who succumbed to the operation was large. It was not decided whether it would not be preferable to remove the tumor itself. Hæmorrhage was a frequent cause of danger, although the means to prevent it were numerous. The doctor exhibited a rubber cloth, to be tied around the pedicle of an abdominal tumor before cutting it away, thus facilitating the operation. In opening the abdominal cavity, he always observed antiseptic precautions, and all operators were agreed in this respect, though all did not use the spray. He did not approve of draining the abdominal cavity, because the peritoneum was a large absorbing sac, only a small portion of which was injured in the operation. He believed that soon removal of the uterus would be as easy and successful as ovariotomy. But he was persuaded that antiseptic surgery was as necessary in opening into the abdominal cavity, as in other operations outside the body.

The paper was referred for publication, with the desire that the illustrations would be reproduced in the Transactions.

Wednesday Afternoon.—Section on Surgery and Anatomy.

UNUNITED FRACTURE OF THE FEMUR, Treated by Exercise. By Dr. George W. Nesbitt.

Such cases were very unfrequent, not more than one occurred in five hundred cases of fracture, so that a physician might not come across a case in a lifetime. In his case, the patient, a man

twenty-nine years of age, broke the shaft of his femur after falling fifty-nine feet. He was placed under the care of an incompetent surgeon, who applied paste-board splints, and December 9, he came to Dr. Nesbitt with an ununited fracture, the limb being almost four inches shorter than the other. The general health was good. The patient in his fall had also broken both arms, which by this time had united. Attempts at reduction were made, extension and counter extension were secured, and a good deal of irritation excited. After six weeks of treatment no union had taken place. Crepitus had ceased from exudation. Feb. 2, 1878, the doctor cut open the fracture and perforated the fragments with bone drills in four places, and set the limb at rest. No union took place. Feb. 18th, iron braces were placed on the limb above and below the site of fracture, and the patient allowed to walk about, massage of the limb being practiced every day without any result. March 31 the physician drilled extensively, broke all the adhesions, and caused a good deal of inflammation to start at the site of the fracture. Nephritic colic set in, patient passed calculi, and the products of the inflammation meanwhile had been reabsorbed. July 25th, of the same year, no union having taken place yet, an elastic stocking was put on the leg, and a plaster-Paris dressing was applied, together with wire gauze, mixed, and extending the whole length of the thigh. The patient went about comfortably with this, and in November union had taken place and the patient was well.

The doctor highly recommended the use of wire gauze in connection with plaster of Paris in cases of delayed union. Following his advice, some other surgeons had tried it, and he reported several of their cases thus treated successfully. The dressing should be renewed in three or four weeks, as the muscles of the limb are liable to shrink in that period. In one case, an abscess had formed in the thigh, though the fracture had united.

DISCUSSION.

Dr. Keller, of Arkansas, called the attention of the members to the fact that these successful cases had not at first received proper treatment. That although plaster had been recommended so many times, it never took well with the profession, and a time

might come when surgeons would make themselves liable to be sued for malpractice for using it, on account of the great number of cases of gangrene thus caused.

Dr. Garcelon, of Maine, related a curious case of fracture of the femur in a man, who, after a short while, was dissatisfied with his medical attendant, and resolved to prosecute him for malpractice. The patient wrapped a piece of stiff leather about his limb, hunted up testimony, and appeared in court, when all traces of a fracture were gone.

Dr. Louis A. Sayre described his mode of applying plaster-Paris dressing, and related some wonderful cases. A great deal of care and tact were necessary, besides the assistance of a competent physician. He dressed compound fractures like the simple, and after drying, he cut a fenestrum in the bandage with a knife.

A case of comminuted fracture of the humerus, with extensive external injuries, had been dressed once by him and allowed to attend to his duties on the third day. In six weeks, union was perfect. The dressings had been made to extend around the chest and the opposite shoulder, in order to fix the broken arm. He remarked that in such cases, were the patient kept in bed, the physician ought not to demand a fee, but was responsible for the patient's loss of time. He had never had a case of non-union in private practice. Plaster-Paris bandage should be applied immediately after the injury, or else after swelling had subsided, but it should not be put on a swollen limb.

He had often put plaster dressing on fractured femur, and let the patient go about on crutches in a few days, though he would recommend care in such cases. The dressing should extend around the thigh and to the opposite side of the pelvis.

Dr. McLean, of Michigan, said that from the turn of the discussion, outsiders would be led to suppose that the attending physician was always responsible in cases of non-union. That was not really the case. In spite of the most skillful treatment some cases would not unite.

Dr. McLean, now presented a patient before the assembly, a girl twenty years old, who was born with a valvus over the left eye-brow. Two pulsating tumors had grown at that point, ex

tending into the orbit. He invited experienced surgeons to examine the case and advise as to the propriety of ligating the common carotid.

An operation had been made for tying the blood vessel around the tumors, six years previous, without any result. Dr. McLean advised ligature of the common carotid. Dr. Moore advised extirpation of the tumor and tying the vessels. There was likely to be much hæmorrhage but that could be controlled. Dr. E. W. Lee, of Chicago, had had experience with such cases, and believed that ligature of the common carotid was a dagerous procedure. Dr. Byrd, of Quincy, Ill., advised galvano puncture of the aneurism.

Section on Practice of Medicine, Materia Medica and Physiology.

TREATMENT OF SYPHILIS with subcutaneous sublimate injections. By J. V. Shoemaker, of Philadelphia.

From the introduction of the hypodermic method of medication by Alex. Wood, of Edinburg, in 1853, it had made great progress. Three years ago, Dr. Shoemaker began treating all the syphilitic patients that presented themselve to the dispensary by hypodermic injections. A glass syringe was preferable in using mercurial injections; and he liked long needles, they were not so liable to cause abscesses. He also used a needle for each patient, to prevent contagion. He began with ten minims representing $\frac{1}{8}$ grain of sublimate. In strong subjects, he increased the dose gradually, by a minim every second or third day. He diminished the dose gradually after a while. In obstinate cases, he pushed the medication till constitutional symptoms manifested themselves. In very susceptible cases he began injecting a couple of minims at first. He had obtained the best results through such treatment. The parts which he usually chose for the injection were the infra-scapular and sacral region which are the least sensitive and are also supplied with a large quantity of subcutaneous cellular tissue in which to inject the solution.

In the 113 cases treated by him, there had been neither inflamation nor abscesses. This mode of medication was especially fitted to cases of impaired digestive system; and in this case it enabled the patient to take tonics internally.

Dr. Shoemaker believed that in cases where this medication had failed, it was owing to the carelessness or lack of ability on the part of the physician.

Section on Dentistry. Dr. D. H. Goodwillie, of New York, Chairman.

Dr. W. C. Barrett, of New York, related a case, and exhibited casts of the teeth, showing the persistance of heredity in dental developments.

Dr. J. S. Marshall, of Syracuse, N. Y., read a paper on the need of dental surgery in the U. S. Army and Navy. Soldiers on the frontier and sailors on a long cruise had no opportunity of receiving dental services. The treatment of fractures of the lower jaw by the ordinary surgeon was now the same as it was twenty-five years ago. The inter-dental splint, invented by Dr. J. V. Bean, of Georgia, during the civil war, and improved by Dr. N. Kingsley, of New York, was a great improvement in that respect.

A committee, consisting of Drs. Allport, Marshall and Williams was appointed, to confer with the Surgeon General of the army and navy, to the effect of providing these bodies with dental surgeons.

THIRD DAY.

June 8, 1882, 10 *A. M.*

Officers for the ensuing year:

President—Dr. John L. Atlee, Philadelphia.
First Vice-President—Dr. Eugene Grissom, North Carolina.
Second Vice-President—Dr. A. J. Stone, Minnesota.
Third Vice-President—Dr. J. A. Octerlony, Kentucky.
Fourth Vice-President—Dr. H. S. Orme, California.
Treasurer—R. J. Dunglison, Pennsylvania.
Librarian—William Lee, Washington.

MEMBERS OF JUDICIAL COUNCIL.

Drs. N. S. Davis, Ill.; J. M. Brown, U. S. N.; X. C. Scott, Ohio; M. Sexton, Indiana; N. C. Husted, New York; William Lee, Maryland; J. E. Rives, West Virginia.

OFFICERS OF THE VARIOUS SECTIONS.

Practice of Medicine.—Dr. J. H. Hollister, Ill., chairman; Dr. J. G. Lee, Penn., secretary.

Surgery and Anatomy.—Dr. W. F. Peck, Iowa, chairman; Dr. Paul F. Eve, Tennessee, secretary.

Medical Jurisprudence and State Medicine.—Dr. Foster Pratt, Mich., chairman; Dr. Thomas L. Neal, Ohio, secretary.

Ophthalmology, Otology and Laryngology.—Dr. A. W. Calhoun, Georgia, chairman; Dr. Carl Seiler, secretary.

Diseases of Children.—Dr. R. Blount, Ind., chairman; Dr. J. H. Sears, Texas, secretary.

Dentistry.—Dr. D. H. Goodwillie, New York, chairman; Dr. T. W. Brophy, Ill., secretary.

Committee on Necrology.—Dr. J. M. Toner, D. C., chairman.

Committee on Publication.—Drs. W. B. Atkinson, chairman; Thomas M. Drysdale, W. Lee, Pennsylvania; R. J. Dunglison, Albert Fricke, S. D. Gross, Casper Wistar.

Assistant Secretary.—I. N. Hines, Cleveland, Ohio. The committee announced that Cleveland, Ohio, had been selected as the place of meeting for next year.

The president appointed the following committee to nominate a board of nine trustees: Drs. L. A. Sayres, New-York; J. M. Toner, District of Columbia; J. Foster Pratt, Michigan; R. J. Dunglison, Pennsylvania; Robert Battey, Georgia; W. F. Peck, Iowa; H. O. Marcy, Massachusetts.

Dr. N. S. Davis, read the following resolutions:

Whereas, It appears from the amended bill making appropriations for the army for 1882–83, as recommended by the military committee of the Senate, that the amount appropriated for the support of the army medical museum and library has been reduced from $10,000 to $5,000;

Resolved, first, That this Association views with great regret and strong disapproval this attempt to cripple two institutions whose great value is recognized by the medical profession of the United States, as well as of Europe.

Second, That in the case of the library, whose collection of medical journals required years of unceasing effort to bring it to

its present completeness, the intended reduction will be especially injurious, as from their transient character such publications would be in many instances irreplacable.

Third, That the publication now in progress of the index catalogue of the library, the most extensive work of the kind ever attempted, makes it desirable that its completeness should not be lessened by the withdrawal of means to procure current medical literature.

Fourth, That this Association express the earnest hope that Congress will restore the appropriation to its former amount, in the interests of the community at large.

These resolutions were adopted and a printed copy ordered to be sent to each member of Congress, and the heads of all the departments.

ADDRESS BY THE SECRETARY OF THE SECTION ON SURGERY AND ANATOMY—Excision of the Intestinal Canal where covered with Peritoneum, by Dr. Wm. A. Byrd, Quincy, Ill.

Successful cases of the removal of part of the intestines dated back but a few years. In most of the cases on record the patients had died. One reason was that the operation had generally been undertaken too late, after extensive adhesions had formed. The question as to the propriety of performing the operation would not be entertained now. It was too recent. But it was probable that a time would come when it would be reckoned a standard operation. Before Spencer Wells had had his success with ovariotomy, no one would call that operation a legitimate one. Resection of the digestive canal was indicated in cases of cancer, a disease which the late president Dr. Hogden, had already taught was a strictly local disease. In case of resection of the stomach, that organ should previously be washed daily with solution of salicylic acid for a few days.

Resection of part of the digestive canal was not followed by any impairment of the digestive system.

In cases of strangulated hernia with gangrene, that part of the bowel that had mortified should be removed, the two ends half brought together and sewed to the edges of the external wound, forming an artificial anus; which, after a space of time sufficiently long should be closed by a plastic operation.

This operation consisted in dissecting the skin around the artificial anus, invaginating it so as to transform the skin into a mucous membrane of the intestine, and returning it after union, into the abdomen.

He had operated on a case October 9, 1878, for strangulated hernia, and eight inches of gangrenous intestines had to be removed. A rapid recovery had taken place and in March, 1879, he operated to close the artificial anus successfully.

In January, 1882 he operated on a case of strangulated femoral hernia in which three inches of the intestine were removed. On account of the disadvantageous situation of the hernia, Dr. Byrd made a second opening two inches above the first, and above Poupart's ligament, to the edge of which he attached the two ends of the intestine, forming an artificial anus. April 13, he operated to close the artificial anus, and the patient had made a good recovery.

THURSDAY AFTERNOON.

Section on Surgery and Anatomy.

Contributions to the Surgery of the Liver; by Dr. Joseph Ranoshoff, Cincinnati, Ohio.

Operations to open abscesses of the liver were not recent achievements, but operations made in the manner to be described, had first been introduced by Dr. Marion Sims, of this country, in removing gall stones from the biliary ducts.

A precision of the diagnosis was not always necessary in order to operate. An early exploratory incision, made with ordinary care, was a legitimate procedure to make a sure diagnosis.

In dropsy of the gall bladder, aspiration of the fluid was sometimes an efficient means. But the disease was sometimes dependant on obstruction of the gall ducts from calculi.

Case I. Removal of calculi from the bile ducts. Patient J. R. K., a male, aged 76, had had dropsy for six months. His urine had the color of tar, he had lost fifty pounds in that time, his liver was enlarged two inches in diameter.

The gall bladder in that case was the size of the fist, hard and movable. The diagnosis was made of a gall stone, or cancer. No pain was experienced, which fact tended to exclude the latter.

The patient had suffered pain, however, five years previous. Having fixed the gall bladder by external pressure, the doctor introduced an aspiration needle which gave exit to thin bile. Passing a long needle in the direction of the bile duct, beneath the gall bladder, the needle struck a stone at a depth of four and a half inches, confirming his diagnosis; and that was, he believed, the first case on record in which a positive diagnosis of obstruction from a gall stone was made. It was decided to operate.

May third, the patient was anæsthetized, an incision four inches long, parallel to the median line was made. After the bleeding had been arrested, and the bowels, which protruded, been returned, one quart of ascitic fluid, mixed with bile, was removed, A firm concretion was now formed in the common duct, consisting of one small and two large calculi, which were removed. The omentum and intestine were cleansed with carbolized water, the gall bladder was fixed to the end of the outside incision, and morphine given.

The dressings were changed after twelve hours, after which the patient declined, and died thirty-six hours after the operation. No post-mortem was granted. One calculus weighed 138 grs., another 122.

Case II. A woman, æt. 32, had had a child five months previous to January 7th, 1882, during which period she lost flesh considerably. She had experienced a great deal of suffering. There were profuse night sweats; her temperature was from two to five degrees higher than normal. A smooth, round swelling, was felt in the epigastric region. An aspirating exploration was made, and January 19, 3¾ pints of pus were removed. The pain and dyspnœa diminished, and after two weeks the patient felt improved. A large quantity of pus was passed with the stools. But the abscess filled again. Feb. 22d, 1882, a solution of iodine and iodide of potassium was injected into the abscess. After ten days it had re-filled, and violent vomiting set in. A free incision was decided upon. The temperature was 105, pulse, from 120 to 150.

Operation.—After taking two ounces of brandy, the patient was administered ether. An incision five inches long, parallel and two inches to the right of the median line, was made into the

abdominal parietes, and the surface of the liver reached; the cutting was done with the galvano-cautery, which prevented all hæmorrhage. No adhesion had taken place, and the surface of the liver was attached to the abdominal walls with wire sutures. Three and one-half quarts of pus were now removed from the abscess, which was cleansed with a five per cent. solution of carbolic acid. Iodoform was dusted over the wound. Patient recovered slowly from the influence of the ether, and was administered morphine.

March 10, she was improving. The wound was dressed and the abscess washed. A constant stream of tepid water was passed in and out of the abscess for eight hours or more a day for two weeks. Alcoholic stimulants were given. The cavity was illuminated by reflected light from a laryngoscopic mirror, and several sloughs were removed from the bottom of the cavity, which the current of water could not wash out. Œdema of the lower extremities disappeared; as also the night-sweats and diarrhœa which had been previously present. The abscess grew smaller and smaller for three months, and the patient is now quite recovered. No aspiration here had been of any avail, and Dr. Ranoshoff had seen cases die from repeated aspirations.

In the light of the discoveries of modern abdominal surgery, it was manifest that abscesses of the liver should be treated by free incision.

By means of the thermo-cautery hæmorrhage was avoided. Listerism had not been resorted to in the last operation.

The Proper Points for Incision in the Drainage of Suppurating Knee-Joints. By Dr. E. Andrews, of Chicago.

Attempts at drainage of the knee-joint often proved unsatisfactory, owing to the difficulty experienced in introducing the drainage tubes. The anatomy of that joint was not considered in the text-books in a way to help the surgeon. There were three cavities in the knee; a lower cavity covering the head of the tibia, lapping backward and downward; another cavity in front of the head of the femur, which became well-marked when distended if the knee was bent; and a cavity in the infra-patellar space. The large bursa under the quadriceps extensor, for practical purposes always present, communicated with these cavities,

and an abscess sometimes extended from the knee into the thigh.

When a general suppuration of all these cavities took place, it became indispensable to anæsthetize the patient and pass drainage tubes into each one, making two openings for each cavity. One opening was to be made on each side of the bursa referred to; one on either side of the patella; on either side of the condyles of the femur, and one on either side of the ligamentum patellæ. The knee should be kept bent while making the incision. As the lower and larger cavity was almost divided in two, it would sometimes be necessary to drain both halves separately.

DISCUSSION.

Dr. Joseph Ranashoff remarked that Dr. Byrd, in his paper on Excision of the Intestinal Canal where covered with Peritoneum, had brought out the new application of an old procedure to effect a result for which it had not been primarily intended. He converted the skin into a mucous membrane in invaginating an artificial anus, and it left the doubt in the doctor's mind, whether the skin, detached from its old blood supply, might not mortify, and endanger the life of the patient.

Dr. Prout did not recommend closure of an artificial anus. He did not think the operation justifiable, because extensive adhesions of the peritoneum had taken place.

Dr. Byrd said that in eighteen operations for strangulated hernia, he lost only one patient, and he always broke the adhesions met with. Nature could not always be trusted to. The safest plan was to be followed in such cases.

Dr. Ellis, of Michigan, related a case of artificial anus which had opened spontaneously, and the patient ultimately got well without surgical interference. A large portion of the bowel sloughed away, and the first discharge from the anus took place after two weeks.

Dr. Dora, of Illinois, said that in December last he saw the case of a woman in which a strangulated hernia had sloughed, and an artificial anus formed. No discharge had passed through the natural anus since. That illustrated the working of nature when left to itself.

Section on Practice of Medicine,

Materia Medica and Physiology. Dr. John A. Octerlony, chairman.

Salicylate of Potassium and its use in Acute Rheumatism and Dyspepsia; by Dr. M. Donnelly.

An experience of two years and a half with the use of salicylate of potassium had proved to the author its usefulness in the treatment of acute rheumatism. He had previously used alkalies in the treatment of that disease, but although neutralizing the acids and restoring the blood to its normal alkalinity, they were slow in their action. When salicylic acid was introduced the profession gave it a fair trial, but large doses of that drug were required to insure an efficient result and its use was liable to cause heart complications. Salicylate of sodium was found to be a good preparation and superseded the latter, though it did not entirely prevent pericarditis and endocarditis. The drug being a neutral salt was not enough alkaline to correct the acidity of the blood.

This induced Dr. Donnelly to look for a more alkaline salt of salicylic acid, and upon experimenting he found that two parts of bicarbonate of potassium would mix with one of salicylic acid, and form an alkaline solution. This, upon crystalizing, formed the salicylate of potassium, which is soluble in two parts of water, and is rapidly absorbed. It relieved the pain of acute rheumatism in a few hours. The urine and perspiration became alkaline after a few hours, sometimes after a few days. The metastatic character of rheumatism disappears, and the recovery is rapid.

To prevent relapse, the author gave the tartrate of iron and potassium which restored the blood to a normal condition. As to the causes of rheumatism, the profession were agreed that abnormal digestive secretions took a prominent part, the result being the formation of lactic acid in the blood.

Salicylate of potassium was most valuable in the treatment of flatulence, pyrosis and loss of appetite, and any form of dyspepsia with acidity. It was preferable to the bitter tonics in such cases.

Dr. J. A. Octerlony said that the salicylate of sodium or of potassium were especially indicated in recent and very acute

cases of rheumatism accompanied with fever. In obese cases the alkalies was more efficient, in sthenic cases, aconite and veratrum viride gave the most rapid and satifactory results.. In the anæmic, he preferred large doses of the muriate tincture of iron.

Section on State Medicine.

Rights of the Insane. By Dr. C. H. Hughes, St. Louis.

Dr. Hughes arrived at the following conclusions as to the rights of the insane:

I. A right to a medical inquiry, by medical men and by medical methods, into the character of their disease. They should have the benefit of a careful diagnosis by competent men accustomed to making such inquiry.

II. The right to judicial rulings on their behalf when put on trial, in accordance with medical science and not according to the judicial conception of insanity.

III. The insane should be protected from themselves and the consequences of their malady, and the State must provide asylums for them. The insane should be prohibited from marriage, for the sake of the unborn. Better not be born at all than be born insane. The State should annul all marriages with the insane so far as is consistent with public morals and the sacred marriage tie.

FOURTH DAY.

Friday, June 9, 1882, 10 *A. M.*

Prayer by Rev. E. D. Neill.

Librarian's Report.—There had been added since the last report 167 distinct titles, exclusive of yearly volumes of transactions of societies, reports of hospitals, boards of health, and volumes of medical journals. The library consists at present of 1,702 distinct titles, or about 4,448 volumes, including pamphlets. The Boston Medical Library Association had generously placed a large number of its duplicate periodicals at the disposal of the library.

The treasurer, Dr. Richard J. Dunglison, of Philadelphia, reported a balance of $1,141.35 in the treasury. He also explained that every one attending a meeting of the Medical Asso-

ciation as delegate for a medical society, should thenceforth be a permanent member of the American Medical Association who should annually pay five dollars to the treasurer.

The following resolution, presented by Dr. A. L. Gihon, U. S. A. was passed:

Resolved, That it is the sense of the American Medical Association that it will be conducing to justice and the dignity of the profession that medical expert testimony shall be given without having the appearance of being in behalf of either side, but to be stated simply as facts.

The following resolution, by Mr. Dennison, of Colorado, was also adopted:

Resolved, That no action of this Association, either in its code or its annual meetings, shall be construed to commit members of the American Medical Association to the adherence of any dogma, and members should have a care not to allow their names to be erroneously registered as allopathists, etc., in State and city registration of physicians.

One thousand dollars were ordered paid the secretary, subject to the condition of the treasury.

The recommendation was made by Dr. N. S. Davis, that every other annual meeting of the Association be held in Washington.

The trustees of the proposed journal are the following:

For three years—Drs. N. S. Davis, Chicago; Moore, New York; and Toner, Washington.

For two years—Drs. Campbell, Georgia; Packard, Pennsylvania; and Connor, Michigan.

For one year—Drs. Hooper, Arkansas; Garcelon, Maine; and McMurtry, Kentucky.

Delegates to foreign societies—Drs. T. A. Emmett, D. Lewis, Wm. Carpenter and E. M. Brush, New York; and J. M. Da Costa, Pennsylvania.

Followed the address of Dr. John L. Atlee, the President-elect, and the meeting adjourned.

SKETCHES OF THE VARIOUS OFFICERS.

JOHN LIGHT ATLEE was born in Lancaster, Pa., where he now resides, November 2, 1799. Graduated in 1820 from the

medical department of the University of Pennsylvania. He was elected one of the vice-presidents of the American Medical Association in 1868; was for some time professor of anatomy in Franklin and Marshall colleges. He revived the operation of ovariotomy in 1843, and was the first to successfully remove both ovaries at one operation.

EUGENE GRISSOM, of Raleigh, N. C., was born in Granville county, May 8, 1831. Graduated from the University of Pennsylvania in 1838. Was elected to his present superintendence of the insane at Raleigh, in 1868. He holds the degree of LL.D. from Rutherford College.

JOHN A. OCTERLONY is a resident of Louisville, Ky. Born in Sweden in 1838, he graduated from the University of New York in 1861. Has been lecturer on chemical medicine in the University of Louisville, and is now professor of practice in the Kentucky School of Medicine.

ALEXANDER J. STONE. Born in 1845, at Wiscasset, Me, Graduated from the Berkshire Medical College, at Pittsfield, Mass., in 1868. Settled in St. Paul in 1870. Founder of the St. Paul Medical College, he holds the chair of Diseases of Women in that institution, at present known as the Minneapolis College Hospital.

HENRY S. ORME, of Los Angeles, Cal., was born in Milledgville, Ga., 1837. Graduated from Oglethorpe University in 1858, and from the New York University in 1861.

R. J. DUNGLISON. Born in 1834. Graduated from Jefferson College. Edited Dunglison's Medical Dictionary in 1874. Has been assistant secretary of the International Medical Congress.

J. M. TONER, of Washington, was born in Pittsburgh, in 1825, and graduated from Jefferson Medical College in 1853; author of the "Toner Lectures."

N. S. DAVIS, LL.D., of Chicago, graduated from the College of Physicians and Surgeons of the Western District of New York, in 1837; is editor of the CHICAGO MEDICAL JOURNAL AND EXAMINER, professor of Practice in the Chicago Medical College, Fellow of the Chicago Academy of Sciences, and is widely known through his medical writings.

W. B. ATKINSON, of Philadelphia, was born in Haverford, Pa., 1832. Graduated from Jefferson Medical College in 1853, he became Permanent Secretary in 1864. Well-known as the author of a Biographical Dictionary of American Physicians and Surgeons.

ISAAC N. HINES, of Cleveland, O., was born at Shippensburg, Pa., 1834. Graduated from the New York Medical College of Physicians and Surgeons. He is professor of physiology and pathological histology in Cleveland Medical College.

ARTICLE IV.

A CONTRIBUTION TO THE REPORT OF THE COMMITTEE ON Medical LEGISLATION. (Read before the Illinois State Medical Society at Quincy, May, 1882). By E. INGALS M. D. Chicago.

That the paramount interests of civilized life require the fostering and protecting care of law, has been fully established by the aggregate experience of mankind, and certainly few things can be of greater importance to the human race than those that conserve its sanitary interests; and this, whether the subject is viewed in the light of the individual and family, or of the public good. A large percentage of the sickness that is suffered—and this not alone by the ignorant and indigent, but by the wealthy and intelligent as well—is preventable. Though centers of infection are apt to be first developed amid squalid surroundings, diseases thus engendered often escape from their place of origin to invade precincts that would otherwise have remained exempt. Ignorance of sanitary laws, or inattention to their observance is, however, by no means limited to the poorer classes.

So far as is possible, protection against all deleterious agencies, is a right, to which every citizen is entitled from organized society, and government should make the poisioning of the essentials of life and health a penal offense, and it should insure that those who are commissioned, under its laws, to the practice of medicine, should be reasonably well qualified for the proper discharge of the

duties of their office. Our commerce, manufactures, agriculture, and common schools, are all regulated to some extent, by laws enacted in the supposed interests of the people.

We have also made some effort to promote the san-itary good of society, in the same manner, for in 1877 the legislature of Illinois passed a law to regulate the practice of medicine, and another to establish a State Board of Health. Hopes were entertained that great good would come from these enactments; especially as it was believed that their influence would increase the efficiency of the medical profession. These laws have now been in operation long enough to test their capacity to accomplish the purposes for which they were placed among our statutes, and our hopes have hardly been realized.

From a careful observation of the effects of these laws ever since they have been in force, I cannot see wherein they have done more than to secure a somewhat imperfect registration of the doctors and midwives of the State, and satisfactory mortuary returns. In spite of them, quacks practice with impunity, the same as before; revoking the license of a well known practitioner, who under the convenient disguise of an alias is guilty of the most unprofessional acts, does not prevent him from continuing his vocation; infectious diseases are not generally reported, and the returns of births are so incomplete that we might better make no pretense of collecting any such statistics. Our sanitary laws are not sufficiently explicit and comprehensive; they are not stringent enough; in some particulars they are obscure and they do not contain proper provisions for their enforcement. Increased security against the dangers of small pox should be insured by providing for a more complete system of vaccination; by enacting severe penalties for secreting such cases, and by prohibiting or regulating their transportation from place to place. The placing of warning cards to indicate the location of diseases that are infectious and highly dangereous, should be made compulsory, and public funerals in such cases should be prohibited by specific enactment.

Infected premises should be inspected by an official appointed for the purpose, who being clothed with authority, should be required to cause the removal of all insanitary conditions inci-

dent to the construction and surroundings of the place. These are only a few hints and suggestions of what might be embraced in the scope of the law.

Some legal means should also be taken to improve the character and increase the usefulness, of the medical profession. On this subject I wish not to be misunderstood. No one is more conscious than I am that the excellence of the medical profession, as represented by its most intelligent members, was never before as high as it is now, and it is every day improving. But while this is true, the facts we meet when we consider the other extreme of the profession are such as should stimulate us to an earnest effort for their removal. Two bodies cannot occupy the same place at the same time; and if the law should rule out incompetent applicants from the profession, the places from which they are excluded would be filled by those who are fitted to occupy them; but if the incompetent are once admitted, they can only be deprived of business by the competition of those who are more capable and better instructed, and the decision between them must be made by the tribunal of the general public, which does not possess qualifications properly to determine such a question.

I believe the standing and worth of the profession would be advanced, by the establishment of a State Board of Examiners, before which all who desire to practice in the State, and who should not already have been registered should go, for examination, and only to be allowed to practice after they had received a certificate of competency from such board. This board should be prohibited from granting license to practice to all who are not graduates from some medical college in good standing, and this good standing of any medical college should be determined by the legal requirement that it should exact of students certain literary and scientific qualifications, to be prescribed by the law, and four years study of medicine, and not less than three annual courses of college instruction, of not less than six months each, for graduation. This would not prejudice the interests of our medical colleges, but would place them all on the same basis, and lead to a generous and laudable rivalry between them as to which should give the best instruction, and this question would be determined by an impartial tribunal. Were such a plan adopted it would im-

pose no hardship on our medical teachers, for they would receive the same rate for teaching as they now do, and if they were required to give more instruction they would be paid proportionately more for it. But should this not be the case, it would be no valid argument against the proposition; for so trifling a matter as the pecuniary interests of a few medical teachers should not be permitted to dominate the best interests of the whole people.

If the medical diploma is to continue to be allowed to confer on its possessor the right to practice medicine in Illinois, great discrimination should be exercised in bestowing it. At present the facility with which it may be obtained diminishes its value.

Though our State has made a great advance in numbers and wealth, our students have abundant means, and leisure for prolonged study, we continue in our requirements for ingress to the profession to follow the practices of a primitive state of society and suitable only for it. The time and money necessarily expended in gaining admission to the profession under the plan proposed would be increased but the physician's rewards would be greater after the admission was gained. Fifteen years of practice after thorough preparation is better for the physician than twenty years with an indifferent preparation, while the gain to society is much greater than to the physician.

Should Illinois do this, the schools of other States would be obliged to follow our advance, or we should educate all of our own practitioners, and while our graduates would occupy the entire field in Illinois, they would be preferred in other States, because they had received their medical education under a more thorough system of instruction.

It is well known that graduates from our medical schools who go before the army and naval boards for admission to the public service usually make special preparation for the examination, and yet, above eighty per cent. of such applicants are now being rejected. Surely no one will claim that citizens merit less skillful medical attendance than the soldiers and sailors of our army and navy. The excellent qualifications of recent graduates who present themselves for examination before our hospital boards for appointment as internes in these institutions is a subject of common remark. These places are coveted, and it is known that superior

attainments are necessary in order to secure them, and the class of students who may indulge some hope of gaining them, work for them from the time they commence their medical studies. If there were fifty such places where there is now but one, there would still be no lack of well qualified graduates to fill them.

Raising the requirements of practitioners of medicine in Illinois would result in no void in the profession. It would only compel a certain number of persons to follow useful vocations outside of the profession, whose labors in the profession can be spared with mutual benefit to themselves and the public.

An easy and entirely practicable auxiliary for improving the character of the profession in Illinois, would be the establishment in some large city of the State, of a medical and dental department of the Illinois Industrial University which is located at Urbana. Illinois has been generous—as she should continue to be—with the charities. She provides liberally for the insane, the blind, the deaf, the feeble minded, and the convicts in her penal institutions. Would it not be just, wise, and politic, to exercise equal liberality towards the class of normal healthy minds that by higher cultivation would gain added powers of usefulness for the public good? The University at Ann Arbor, so far from having been a burden to Michigan, has doubtless been the means of increasing her wealth and numbers to a degree that would have made its founding and support an act of wisdom, if viewed only in the light of the State's material interest. If Michigan had never established this University her rank would be less advanced than it is at present among her sister States. But it is unfortunate that the medical department of the University had not been located at Detroit, for all medical schools, for obvious reasons, should be in large cities.

Illinois will have six or eight millions of people, who will possess an amount of wealth that we at present little realize, and we have greater cause for solicitude about our future moral and intellectual condition than for what pertains to our material interests. We should provide for a University that would in time take rank with any in the world. Such an institution would be of incalculable benefit, and would stamp its impress on our entire people.

The world is familiar with Dartmouth, Cambridge, New Haven,

and Ann Arbor in America, with Oxford, Cambridge, Heidelburg, Göttingen, and many other cities of the old world; chiefly because they have been the seats of learning of superior excellence. If the Illinois Industrial University had a medical department, through this it might fix the standard of medical education for the State, for all the schools would necessarily advance their requirements until they would be recognized under the statutes by the board of examiners; because no school would be willing to issue diplomas that would not entitle their possessors to such an examination. The expense of such a department to the State need be nothing beyond the original plant, as fees from students, no higher than are now charged by other schools, would pay teachers of the first rank, meet all incidental expenses, and furnish it munificently with every means of teaching and illustration; and should it acquire the public confidence and sympathy by establishing and maintaining a high grade of excellence it would doubtless become the recipient of generous private endowments, as the medical departments of Harvard, and of the University of Pennsylvania have from a like cause.

A single appropriation by the State of one hundred thousand dollars, to be expended in building and equipping the institution, would be all that would be required to establish and maintain a medical department of our University that should be a credit to any State, for the school once in operation would provide abundantly for its every want from the fees of students. We annually graduate a larger number of medical students than we ought. The adoption of the recommendations we have offered would tend to decrease the number and improve the quality of those receiving the degree.

MALARIA IN RHODE ISLAND.—This State had been free from malaria for the past fifty years, until the summer of 1880. At this time an endemic of intermittent fever occurred at Nyatt. During the past summer, Dr. C. V. Chapin tried to estimate the extent of the disease in the city of Providence. He obtained reports of about 300 cases.—MED. REC.

Foreign Correspondence.

ARTICLE V.

VIENNA, MAY 2, 1882.

EDITORS MEDICAL JOURNAL AND EXAMINER:—The topic of the month has been the demonstration by Dr. Robert Koch, before the Physiological Society in Berlin, of bacilli, which he asserts, after a series of observations and experiments extending over some two years, to be the direct exciting cause of phthisis and tuberculosis. His statements may be summarized as follows:

Tuberculosis, in the most comprehensive sense of the term, including miliary tuberculosis, cheesy pneumonia, etc., is a parasitic disease, induced by a bacillus similar to that of lepra. By means of special staining methods (first with methylviolet and then vesuvin) Koch always detected the characteristic motionless rods, especially in places where the process was most recent; the rods were less numerous around the giant-cells. He succeeded, moreover, in cultivating the bacillus, quite free from all admixtures, in blood-serum and gelatine. It grows very slowly, and only under a temperature between 30 and 40 degrees Cent.

From these artificially cultivated bacilli (the cultivation extended over some six months, with constant transfer to fresh glasses) he inoculated a large number of animals—guinea-pigs, rabbits, rats, dogs—sometimes by means of simple incision in the skin; sometimes in the anterior chamber of the eye, sometimes by injection into the circulation. The result was almost invariably the production of acute tuberculosis—in many cases, further, the induction of cheesy transformations of tubercle. A number of specimens were demonstrated.

The alleged discovery of the tubercle parasite is by no means a novelty. Some time ago Aufrecht announced that he had seen them, and Klebs, who seems to have a mania for such things, was even earlier in the field; but these isolated observations, unsupported by experimental or other evidence, were classed with the numerous similar "discoveries" of pathogenic bacteria, in which recent literature abounds. Koch's researches, however, are so extensive and accurate, so thorough and convincing, and his previous investigations in the same direction have been so admirable, that his statements cannot be ignored, and we may expect that the question will now receive thorough investigation by competent hands.

It is a little amusing that Baumgarten, in Königsberg, a few days after Koch's demonstration in Berlin, published the discovery of bacteria in tuberculosis artificially produced in rabbits—a discovery made several weeks before Koch's publication. His methods were entirely different from Koch's, and a little comparative investigation showed that Baumgarten's bacteria were entirely distinct in size and shape from Koch's. Moreover, both Baumgarten and Koch refuse most decidedly to allow any relationship between their bacteria and the stuff which Klebs, Schueller and Aufrecht regarded as the parasitic agent in tuberculosis. Up to date there are, therefore, at least three entries for the tuberculosis handicap, with large odds on Koch's parasites against the field.

At the recent Congress of German physicians at Wiesbaden, Koch's address (essentially the same as in Berlin) called forth an animated discussion. Aufrecht, of Magdeburg, remarked that the question of tuberculosis as infectious disease could not be considered as definitely settled by this discovery, and that until a definite solution was reached, social and hygienic conditions must continue to play an important part in the conception as to the etiology of the disease. Seitz, of Munich, declared himself opposed to the unconditional infection theory. The assumption that tuberculosis is an infectious disease, due to the inhalation of bacteria, is by no means so good an explanation of the observed phenomena as the older view as to etiology. How, he asked, shall we explain the unquestioned heredity of the disease? and

how the "phthisical habit" which so often heralds the coming consumption? There must be assumed, not simply an infection, but also such constitutional conditions as favor the development of the infecting material. Rühle, of Bonn, emphasized the fact that phthisis and tuberculosis are by no means to be regarded as identical. That phthisis induces tuberculosis is proven, but it remains to be demonstrated that tuberculosis bears a causal relation to phthisis.

Jürgensen (Tübingen) was favorably disposed toward Koch's views. His experience in a region comparatively free from tuberculosis has led him to believe that a bronchial mucous membrane, in a catarrhal condition in consequence of enfeebled heart's action (in old people generally, and in children with catarrhal pneumonia) was a by no means favorable soil for the reception of the tubercle parasite. Klebs, of Zürich, adopted Koch's views, of course; he expressed the hope that the question of heredity (whether, namely, the transmission occurs directly from mother to fœtus, or after birth, by means of the milk) will soon be thoroughly studied.

Bagnisky, of Berlin, thinks that the question raised by Seitz and Rühle was solved by observations on children; that the identity of phthisis and tuberculosis was not to be ignored; the variability in the phenomena of the two depends upon the nature of the soil infected. It is well known that little children rarely exhibit phthisis in characteristic form; they become tuberculous. The explanation is that the child's lung, thanks to the relatively greater strength of the right heart in early life, is far more succulent than in more advanced years; for in adult life, the left heart so far excels the right in power, that the lung is less succulent; hence the same infectious material can induce different pathological conditions at different periods in life, or in different individuals of the same age.

The iodoform war continues without abatement. One of the most ferocious among the numerous assailants is Kocher, of Bern, who thinks that the use of iodoform should be forbidden, in the interest of public safety, either by sanitary authorities or by the surgical congress. He says, moreover, that the subnitrate of bismuth accomplishes all the good results claimed for iodoform, and

is at the same time cheaper and odorless. He promises a detailed account of his experience with this substance at some time in the near future.

König supplements his previous report with sixteen additional cases of intoxication from iodoform dressings. These tend to confirm his deductions from the previous cases. Eleven of the sixteen patients were more than thirty-five years old; seven over fifty. The five fatal cases occurred in patients aged seventy-two, fifty-six, fifty-eight, fifty-two and thirty-seven years respectively. In one he observed an exanthem closely simulating scarlet-fever rash.

One of these new cases is worthy of note. The operation was a resection of the knee. The first bandage—iodoform, quantity not stated—was allowed to remain six days; subsequently the bandages were changed every second or third day. Immediately after the operation the pulse increased in frequency from 80 to 120; during the first sixteen days it varied between 100 and 150; in the third week it was less frequent; in the fourth and fifth weeks 130 to 160, sometimes not to be counted. The temperature was constantly high—in the fourth and fifth weeks over 40° C.; then chills, hallucinations, loss of appetite, emaciation, were observed; the wound became painful. Under the conviction that pyæmia existed, the limb was amputated in the fifth week after the resection. Union occurred promptly under iodoform dressings, and the patient made a satisfactory recovery. In the amputated member there was found no pus, neither in the soft parts nor in the bones, but a *lump of iodoform between the resected bone surfaces.*

The discussion in the Berlin society as to the results of nerve-stretching for the cure of tabes dorsalis brings but little new. Several cases which Langenbeck had considered successful have been pronounced by others failures. Israel gives his own experience; he has seen marked, but only temporary improvement. One case was noteworthy—a case of advanced tabes, with general analgesia and deficient tactile sensibility over the entire body. The right sciatic nerve was stretched. Two days later the analgesia had vanished. The power of localization had returned. The patient could locate correctly needle-pricks, and could dis-

tinguish the head from the point. The girdle sensation had ceased. The gait was much improved; the man could stand with closed eyes without reeling noticeably, etc. The improvement still continues, but Israel expresses no confidence as to its permanence.

Hahn has operated in twenty-five cases, and summarizes his experience as follows: "I have achieved temporary improvement in cases of neuralgia, tonic and clonic spasms, epileptiform attacks of peripheral origin. In cases of trismus, tetanus and tabes, the operation has, in my hands, always failed."

Westphal deduces from the discussion that not a single case of tabes dorsalis has been cured by nerve-stretching; it is even doubtful if particular symptoms, especially the pains, can be bettered for any considerable time; certainly, in many cases, this symptom has not been in the least improved. He thinks that nerve-stretching can do no more than internal medication, electricity, etc.

Billroth's assistant recently reminded the medical public that the woman whose pylorus he extirpated in April, 1881, still lives, is in excellent health, and exhibits no signs of recurrence of the cancer. Billroth's own case, operated on six months ago, is in a condition equally satisfactory. A patient upon whom Czerny performed this operation some months ago, has gained forty pounds in weight since. Billroth and his school are evidently determined to prove the possibility of permanent immunity from the disease through this operation.

W. T. BELFIELD.

A REPLY TO DR. A. B. PALMER'S BOOK ON "HOMŒOPATHY — WHAT IS IT?" — Dr. James. H. Patton, of Richmond, Va, will commence, in the April number of the *Southern Clinic* a series of papers, which will be a review and reply to Dr. Palmer's work.

Dr. Palmer's book will be methodically taken up and answered chapter by chapter. Dr. Patton is a graduate in regular medicine, as also of the homœopathic school, a prominent physician, and a trenchant writer.

Domestic Correspondence.

ARTICLE VI.

NEW YORK, MAY 1, 1882.

DEAR SIR:—Will you kindly call the attention of the readers of your journal to the proposition which I am about to make?

A "System of Gynæcology by American Authors" is in process of preparation, and it is intended that this shall be as nearly encyclopædic as possible.

To me has been allotted the task of writing the chapter on the "History and Statistics of Ovariotomy." To obtain complete statistics of all ovariotomies done in the three-quarters of a century of the history of the operation, is a task quite impossible, as many of the earlier ovariotomists are dead, and their records lost. Even among the living many may be disinclined to co-operate with me as they should. Although the report of each operator's cases may cost him some time and trouble, you will readily see what a valuable fund of information will be obtained by the collation and arrangement of all the facts to be gained.

It is desirable, too, to have all material ready for the press by the end of this year—so that the sooner the returns are made, the lighter will be the task of the editor. Please request all who wish their cases published, to send me the reports before September 1 prox.

May I request your earnest co-operation in the matter, that the work may be worthy the great subject in hand.

The questions to be answered are as follows:

1. Name of Operator? 2. Age of Patient? 3. Nationality? 4. Married or single? 5. Aspiration or previous tapping? 6. Duration of growth? 7. Laparotomy or vaginal Operation?

8. Condition of patient at time of Operation? 9. Were antiseptic precautions used? 10. Was the spray used? 11. Long or short incision? 12. Adhesions or other complications? 13. Double or single Ovariotomy? 14. Pathological features of Cyst? 15. Treatment of the Pedicle? 16. With or without Drainage? 17. Duration of operation? 18. Complicated or uncomplicated history after Operation? 19. Anti-Pyretic used, if any? 20. Result. Cause of death, if any? 21. Primary or secondary operation?

Let the answers be as concise as possible. In many cases a simple yes or no will suffice.

Will you kindly assist in giving the greatest publicity possible to this notice, and publish it for a sufficient length of time in your journal? Blanks, containing lists of the questions referred to, will be sent to any address.

All communications should be addressed to me at 191 Madison Avenue.

J. E. JANVRIN.

THE MEDICAL STUDENT'S PRIMER.—What place is this? This is the Pathological Society. How does one know it is the Pathological Society? You know it by the specimens and the smells. What does that gentleman say? He says he has made a post-mortem. All the gentlemen make post-mortems. They would rather make a post-mortem than go to a party. What is that on a plate? That is a tumor. It is a very large tumor. It weighs 112 pounds. The patient weighed eighty-eight pounds. Was the tumor removed from the patient? No, the patient was removed from the tumor. Did they save the patient? No, but they saved the tumor. What is this in the bottle? It is a tapeworm. It is a long tapeworm: it is three-quarters of a mile long. Is that much for a tapeworm? It is, indeed, much for a tapeworm, but not much for the Pathological Society.—MED. REC.

Reviews and Book Notices.

ARTICLE VII.—HOMŒOPATHY.—WHAT IS IT? A STATEMENT AND REVIEW OF ITS DOCTRINES AND PRACTICE. By A. B. PALMER, M.D., LL.D., Professor of Pathology and Practice of Medicine in the College of Medicine and Surgery in the University of Michigan.

This little *brochure* consists of the subject matter of a series of lectures delivered before the students of Ann Arbor University, containing an exposition of the Homœopathic faith and a fair discussion of its doctrines.

The writer asserts that the kind of opposition hitherto made to Homœopathy gives the non-medical public an impression that there exists an unreasonable prejudice against a body of professional men, and a narrow illiberality toward a system of medicine professing to be an improvement on the ordinary methods of the regular practitioners; and this gives the Homœopathic fraternity an opportunity to appeal to public sympathy by the cry of persecution for opinion's sake.

The laity have usually extremely vague ideas on the subject of medicines and the different medical schools. They have an indistinct impression that there is some specific system of old school medicine called Allopathy opposed to and intolerant of the new school system of Homœopathy, but are without any definite or technical knowledge of either, they are ignorant of the fact that regular scientific medicine is no exclusive, dogmatic system at all. They do not understand that it is a science and an art. A system of scientifically observed facts, with certain practical deductions drawn from them without speculative dogma or canon of faith. They usually become adherents of one or the

other class of practitioners from some accidental influence, or from crude inexact observations they may have made, but without any fair examination of the subject.

The general object of this little work is to supply one of our defects in the treatment of the Homœopathic system. There is no temptation to exaggerate the peculiarities of these teachings, as they are sufficiently striking in the language of their authors. Pains have been taken to give exact quotations, and to present the unmistakable meaning of the quoted text. The references to titles and pages of Homœopathic works are made with care.

The exact status of Homœopathy in England and on the Continent, ascertained by personal inquiry, is given from the lips of many prominent European medical men. It is stated by them that the chief supporters of the waning system are among the country clergy, who, provided with hand-books and medicines, dose their parishioners for their minor ailments.

The usual absurdities of the so-called provings are related. Tables of the triturations in detail are carried out. Some of them are by Sir James Simpson, of Edinburg, confirmed by the mathematical faculty of Edinburg, which demonstrate that the fifteenth trituration of a grain of medicine would require a mass of sugar sixty-one times as large as the earth. One minim of Mother Tincture, at the twelfth attenuation, demands a sea of water six times the size of the Mediterranean.

To the medical man beset by blatant Homœopathic associates, this little work proves a constant friend. It should be in every practitioner's library. W. L. D.

ARTICLE VIII.—THE MOTHER'S GUIDE, in the Management and Feeding of Infants. By JOHN M. KEATING, M.D., Lecturer on Diseases of Children at the University of Pennsylvania, etc.

This pleasant little volume contains a great deal of common sense advice in plain, clear language, addressed to the better class of mothers. The chapters are mostly on hygienic subjects connected with infantile life from birth to the end of dentition. Those on selection and preparation of artificial foods and the management of constipation, the directions for procedure in the

various emergencies of childhood, what to do until the physician arrives, are all excellent. We cordially commend the little book as a companion to all reading mothers. Philadelphia: H. C. Lea's Son & Co. 1881. W. L. D.

ARTICLE IX.—THE ANATOMIST. A Complete Description of the Anatomy of the Human Body. Intended for the Use of Students preparing for Examination. By W. W. HILLES, formerly Lecturer on Anatomy at the Westminster Hospital School of Medicine.

This compact volume is, as it professes to be, a compendium of anatomical information.

The cuts, though small, are the best and clearest we have seen in a volume of this size. Those especially of the ear, eye and joints are fine. The arteries traced in red, the veins in blue, on the limbs outlined in white; the nerves in white on black ground, are suited for vivid impression upon the memory. An excellent book for hasty perusal. New York: G. P. Putnam's Sons. 1881.

W. L. D.

ARTICLE X.—ILLUSTRATIONS OF DISSECTIONS, VOL. II. A Series of Original Colored Plates the Size of Life. By G. V. ELLIS and G. H. Ford.

Reduced on a uniform scale and roproduced in fac simile. The drawings from nature by Mr. Ford, from dissections by Professor Ellis, of University College, London. This forms another of Wood's fine series for 1882.

The accompanying text in some places treats of the operative surgery of the parts illustrated, and furnishes a very acceptable demonstration. Wm. Wood & Co., New York: 1882.

W. L. D.

ARTICLE XI.—A GERMAN-ENGLISH DICTIONARY OF WORDS AND TERMS USED IN MEDICINE AND ITS COGNAGTE SCIENCES. By FANCOURT BARNES, M.D., M.R.C.P., Lord Physician to the Lying-in Hospital, etc. Philo P. Blakiston.

The writer has endeavored to translate most of the words used in botany, chemistry, anatomy, physiology, medicine and surgery.

Such a work, in view of the ever-increasing number of new words, needs constant revision to be of much service to the student. The volume is of handy size, and will form a valuable companion to the translator. W. L. D.

ARTICLE XII.—MANUAL OF THE PHYSICAL DIAGNOSIS OF DISEASES OF THE HEART, Including the Use of the Sphygmograph and Cardiograph. By ARTHUR ERNEST SANSOM, M.D., London.

This is a most valuable little volume. The author has exhausted the subject of the physical diagnosis of diseases of the heart. Some of his statements are too dogmatical; as "notable feebleness of impulse, co-existing with irregularity, is pathognomonic of dilatation of the left ventricle, and indicates that the muscular fibers have become disintegrated, and have lost their tonicity."

The author has investigated the use of the sphygmograph and cardiograph, and has recorded many useful facts. But until these instruments can be simplified and made more uniform in their action, they must be more useful to the clinical investigator than to the every-day practitioner.

ARTICLE XIII.—TRANSACTIONS OF THE INDIANA STATE MEDICAL SOCIETY, AND CODE OF ETHICS, 1881.

This contains the President's address, by Dr. T. B. Harvey, Indianapolis; various papers; transactions of the thirty-first session, constitution and by-laws; with American Code of Ethics.

H. Charles, M.D., of Carthage, in a paper on "Tobacco and its Toxic Effects," says: "I am led to the conclusion that tobacco is the cause of more heart disease than any one thing beside; and I am inclined to think that it brings on more of this trouble, in its various phases, than all other causes combined." This is diametrically opposed to the teachings of Flint, Fothergill and others.

ARTICLE XIV.—REPORT OF STATE BOARD OF HEALTH, MICHIGAN, 1880.

From this report it is evident that the most widely distributed, although not often fatal, disease is intermittent fever; 92 per cent. of the diseases observed and reported being intermittent fever. Of other diseases, 90 per cent reported diarrhœa; 32 per cent. diphtheria; 10 per cent. scarlet fever. No small-pox was reported from any part of the State. Contributions by John Mulvey, M.D., British Navy, and A. W. Nicholson, M.D., Otisville, on "Ozone in Nature," and the best methods of observing it, are quite instructive.

TRANSACTIONS MISSOURI STATE MEDICAL ASSOCIATION, 1880.

SECOND ANNUAL REPORT OF BOARD OF HEALTH, LUNACY AND CHARITY, SUPPLEMENTARY, OF MASSACHUSETTS, 1880.

BOOKS AND PAMPHLETS RECEIVED.

Foster's Physiology. 2d Edition. H. C. Lea.

Dalton's Physiology. 7th Edition. H. C. Lea.

Sensation and Pain. Taylor. G. P. Putnam's Sons.

Physicians' Clinical Record. D. G. Brinton. Philadelphia.

Winter and its Dangers. Osgood. P. Blakiston.

The Anatomist. Hilles. G. P. Putnam's Sons. New York.

Opium Smoking. Kane. G. P. Putnam's Sons.

Eczema and its Management. Bulkley. G. P. Putnam's Sons.

Holmes' System of Surgery. Vol. III. H. C. Lea's Son & Co. Philadelphia.

Diseases of the Chest, Throat and Nose. Ingals. Wm. Wood & Co. New York.

A New Form of Nervous Disease. Searl. Fords, Howard & Hurlbut.

The Nurse and Mother. Coles. J. H. Chambers & Co. 1881.

Illustrations of Dissections. Ellis and Ford. Wm. Wood & Co. New York.

Handbook on Diseases of Women. Brown. Wm. Wood & Co.

State Board of Health, Massachusetts. 1880. Rand, Avery & Co. Boston.

Diseases of Children. Meigs and Pepper. Blakiston, Son & Co.

Index of Surgery. Keetley. William Wood & Co.

Treatment of Varicocele. Henry. Vail & Co. New York.

Lectures on Diseases of Women. Henoch. Wood & Co. New York.

Coleman's Dental Surgery and Pathology. Stellwagen. Lea. Philadelphia.

Materia Medica and Therapeutics. Inorganic Substances. Phillips. L. Johnson. New York.

The Incidental Effects of Drugs. Lewin. Wm. Wood & Co.

Transactions of American Medical Association, 1881. Collins. Phila.

Physiological Chemistry of the Animal Body. Gamgee. MacMillan & Co. London.

Diseases of the Eye. Williams. Houghton, Mifflin & Co. Boston.

The Physician Himself. Cathell. Cushings & Bailey. Baltimore.

THE U. S. PHARMACOPŒIA.—The revision of the *Pharmacopœia*, we are informed, is nearly completed. The work will make a duodecimo volume of from 400 to 450 pages. The mode of issuing it must be very soon considered and decided. The copyright will be disposed of, no doubt, in accordance with the instructions, on the best terms obtainable. The manner of inviting proposals for the publication of the work has not yet been determined. It is probable, however, that those who think of competing for the copyright may obtain the information desired by applying to the chairman of the "Committee of Revision," Mr. Charles Rice, Bellevue Hospital, New York.—*Druggists' Circular.*

Editorial.

The April issue of this journal contained a statement, in the letter of our New York correspondent, which requires correction. It is there said that the New York Obstetrical Society had voted to give its reports to the *New York Medical Journal*, in consequence of the unpopularity of the editor of the *Journal of Obstetrics* with the New York gynæcologists. Had our attention been sooner directed to this personal statement, it should have been corrected at an earlier date.

The facts of the case, as learned by us, are that the New York Obstetrical Society offered its transactions to the *Journal of Obstetrics* under certain conditions of a business nature, which the publishers of that journal were unwilling to accept. The publishers of the *New York Medical Journal*, being, of course, anxious to secure for their columns such valuable material, did accept the conditions under which the transactions had been offered to the other journal named, and thus the change was effected. There was in the entire matter, from first to last, no element whatever of personal feeling, the entire proceeding being conducted and decided on business principles.

Though late in making this correction, it is none the less necessary, both for the reputation of Dr. Mundé and of ourselves. The former is not only a brother medical editor who is as highly esteemed by us as any single member of that guild, but is a gentleman whose reputation as a specialist is as wide as this continent. No man could sit down to write the list of eminent American gynæcologists and obstetricians, without including his name, and if the writer were specially well informed, Dr. Mundé's name would appear very high on the list. The latter has in no

sense lost in popularity with the New York obstetricians and gynæcologists; and if he had, it would be no reflection upon him. We have taken the trouble to get at the facts in this case, and feel that the reparation which we desire to make in this connection is simply an opportunity to pay a well-deserved compliment to a distinguished American physician.

THE following item in regard to Samuel Piercy, the actor, who died of small-pox some time ago, is copied from the New York correspondence of the *Philadelphia Press:* "He was one of a half-dozen intelligent men I ever knew to be influenced by the crazy howls of the anti-vaccination fanatics. Jebb and Bergh, and the rest of the mistaken lot, had managed to convince him that the risks lurking in the preventive were worse than the dangers of the disease. Before leaving New York, a few weeks ago, he laughingly rejected the advice of friends who urged him to be vaccinated. He was a convert to the views of Jebb and Bergh, and he paid the penalty of martyrdom."—*Michigan Med. News.*

PESSARY RETAINED FOR ELEVEN YEARS.—I read in this month's *Courier* the report of a case by J. G. Earnest, in which a pessary was retained in the vagina for six years. I can nearly discount that. One year ago, Mrs. H——, of Chicago, while on a visit to Charlotte, where I was then engaged in practice in company with Dr. L. A. Lebeau, formerly of St. Louis, called upon my associate, and consulted him in reference to a persistent leucorrhœa and stricture of the vagina. Upon examination, he discovered firmly imbedded in the folds of the vagina, and covered nearly its entire circumference in a mass of granulations and cicatricial tissue, a hard rubber ring pessary, which she informed the doctor had been placed there eleven years before by a physician of Chicago, and had remained there ever since, having never been once removed.—*Cour. of Med.*

Original Translations.

La France Médicale contains notes of a case of extremely low temperature following a prolonged exposure to cold during an excess of drunkenness. The patient was picked up unconscious on the street, and died the next day, with a temperature of 79° F. (26° C.) January 27, 1882.

Prof. M. B. Ball related before a meeting of the Académie de Médecine, February 21, the case of a patient who had hallucinations of hearing confined to one side, that in which purulent otorrhœa had followed typhoid fever.

An Accessory Placenta.— The 19th of February last, a woman gave birth at the Maternité to a living child, head presentation. Fifteen minutes later, the placenta appeared at the vulva, and yet could not be immediately removed. While the midwife was tying a ligature back of the portion expelled, a hæmorrhage took place, and a second placenta was expelled, weighing 40 grams, and the first one 410. The two were formed by a membrane and a few ramifications of blood-vessels.—*Bulletin.*

A New Stock of Cow-pox.—Dr. Herviens has lately been experimenting with the virus from a spontaneous case of cow-pox in a heifer at Laforet, near Bordeaux. In relating his experiments before the Académie, the doctor said that he personally believed in the spontaneous origin of cow-pox, and of small-pox also; saying that the first case that ever took place must have been spontaneous, any way (?)—*Le Praticien.*

At a meeting of the Société de Chirurgie, February 22, 1882, Mr. Th. Anger reported a small epidemic of tetanus which came under his observation at Cochin Hospital last year. Four pa-

tients rapidly died of the disease. While demonstrator of anatomy at Clamart, the same observer witnessed the death of a sloth, together with her six young ones, from tetanus, after they had lived some time in a stable in which two horses had died of the same disease.

Bone-grafting.—Mr. MacEwen, of Glasgow, states, in a note to the Institut, that he has succeeded in reproducing om. 114 of the humeral diaphysis by means of six osseous grafts taken from the tibias of children affected with rickety curvatures. These grafts included the periosteum and the marrow also. The new humerus thus formed was half an inch shorter than the opposite one. The grafting was done antiseptically.—*Revue Médicale.*

A Curious Case of Hysteria, Accompanied with Paraplegia and General Anæsthesia, by Dr. Enrique Gélabert.—The writer places the following epigraph as a heading to his article: "*Propter solum uterum mulier est id quod est.*" Perhaps these words do not agree with the current scientific idea of our days. However it may be, here is the case: It is that of a girl seventeen years old, who had never menstruated, and had a lymphatic temperament very marked. Four months previous to this, she had entered a shop, in order to strengthen her debilitated constitution, and heal some multilocular adenitis, having remained idle till then. That while her health improved, the adenitis disappeared, and her physiognomy was good. At that time, hysterical accidents suddenly appeared, which the writer referred to *propter solum uterum.* One day, while the girl was following her ordinary duties in the infirmary, seemingly in good health, she suddenly uttered such a loud outcry that the neighbors heard it. The nurse ran to her and interrogated her, whereupon the patient said that she had felt such intense pain in her abdomen that she had not been able to control the cry just uttered. Patient continued at work, but in less than two hours another outcry, more piercing than the first, was heard. This time, the nurse found the patient on the floor, with her face downward, and giving no sign of life. The physician called to see her, two hours later, found the skin cold, the face livid, the pulse small and frequent, the eyesight vague, respiration slow, the senses blunted, and

absence of motion. All at once, the patient burst out laughing and singing.

Briefly, in twelve days, she developed a classical attack of hysteria, with bolus, general cutaneous and muscular anæsthesia, which afterward turned into hemianæsthesia, and later into superior hemianæsthesia.

Tartrate of antimony was very efficacious in this case, given hypodermically; besides, let us note that between the fifth and sixth day of the attack, the signs of her first menstruation appeared. The writer explains by that sexual evolution the hysterical attack. The patient did not take any food for eight days.

In relation to this, the writer relates the extraordinary case of a girl who was seized with an hysterical attack in her sleep, and did not take any aliment for seven weeks.—*Revista de Ciencias* in *Revue Médicale.*

Artificial Feeding in Pulmonary Phthisis.—Phthisis, says Prof. Peter, is a general and more or less immediate result of tuberculosis; a sort of organic cachexia, whose appearance and progress the physician can, in many cases, delay, even though he is powerless against the cause of the disease, the tubercle.

There is a sinking of the patient, sometimes slow, sometimes rapid, liable to aggravation and improvements, according to the resistance of the constitution. If there is tolerance, the struggle between the constitution and the tubercular products will be longer, and the physician will have time to delay the period at which the tubercles must become phthisical. But the essential factor of such a tolerance lies in the normal functions of the chief systems, especially the digestive.

There is no doubt that insufficient feeding, especially in those hereditarily predisposed, may give rise to tuberculosis. In case the digestive canal is gravely affected and it loses its functional activity, or in cases in which food is not taken in sufficient quantityor quality, tuberculosis may set in. As a proof, there is the frequent co-existence noticed by Lebert, Gallard and Bernutz, of tubercular phthisis with narrowing of the œsophagus, be it cicatricial, cancerous or spasmodic.

Prof. Peter, who was the first to lay stress on the pathogenetic

relation between these two pathological processes, relates in his *Leçons de clinique médicale* cases which show plainly this morbid and causative relation: physical impediment to the taking of food; progressive inanition; marasmus; tuberculosis of the lungs. But if insufficient feeding alone is capable, of itself, of giving rise to tuberculous lesions, it must in a greater degree aggravate those already present.

Hence the diet of the phthisical, and of the tuberculous must be the object of special care on the part of the physician. The food must be substantial and variegated. But although it is easy to fill this indication during the early stages of the disease, when the appetite is good, and the digestive canal is not yet attacked, it becomes a difficult matter in ulterior stages, when vomiting and diarrhœa appear, and the appetite diminishes or is succeeded by anorexia.

To remedy the vomiting likely to occur under the circumstances, recourse may be had to washing of the stomach. (See the JOURNAL, April, 1882, p. 393.)

The anorexia remains, which tonics, bitters, mineral waters, etc., are generally insufficient to relieve.

Anorexia is not without its dangers, even in patients possessing sufficient strength, as the hysterical, for instance,—but it is especially dangerous in cachectic patients as the consumptive. These unfortunate patients, consumed by hectic, wasted by profuse sweats, diarrhœas and bronchorrhœas, fatally succumb whenever their appetite fails them.

But, as Mr. Debove wisely remarked, the power of digestion and the appetite, although corresponding in a healthy state may be disassociated in a pathological one; that is, a patient may lack appetite, while still able to digest well. It is also possible in some patients, for the violent disgust accompanying the ingestion of food to excite vomiting.

This way of reasoning, which has been proven practically correct, has been the starting point for artificial alimentation, the results of which have been communicated to the Societé Médicale des Hôpitaux, by its author, Mr. Debove.

The first trial was made on a phthisical patient with advanced signs of pulmonary tuberculosis, and with large caverns. This

patient was wasted, had profuse sweats every night, and was so weak as to be hardly able to be up a few hours every day. Every time that he tried to eat, he was seized with disgust, with cough and vomiting. He could not swallow more than one-fourth of a glass of milk.

The failure of general treatment and the indications of an early death called for a new treatment, and Mr. Debove resorted to artificial alimentation.

At a first sitting, a liter, (one quart) of milk was introduced into the stomach, through a sound, after washing of that viscus. It was well borne, and produced neither diarrhœa, vomiting nor nausea. On subsequent days, these injections into the stomach were given twice daily, and the amount of milk increased to two liters, 200 grams (7 ounces) of raw pounded meat, with two eggs.

Notwithstanding that relatively enormous quantity of food, digestion took place, and absorption proceeded in like manner, for the weight of the patient increased about 92 grams a day. However, two slight indigestions took place, one after adding 60 grams of tapioca to the milk, the other following an indiscretion.

With an increase in weight, other results as remarkable appeared. The sweats stopped, sleep returned, the strength increased so that the patient was able to walk a part of the day, the expectoration diminished. But the caverns remained as before.

In a second case, in which the disease was not so far advanced, improvement was more rapid yet, though the washing of the stomach was not practiced. The medium increase in weight was of 192 grains daily. No accident occurred.

Analysis of the urine of this patient showed an increase of urea, a diminishing of the amount of urine, and an increase of albuminuria. This is to be referred to the diet. Some physiologists say that the raw albumen of the egg is partly eliminated through the kidneys, and thus give rise to a slight albuminuria.

The third patient labored under greater disadvantages than either the preceding ones. He had reached the last stage of the disease. A loss of 50 grams per day in weight took place, although the sweats, diarrhœa and insomnia were alleviated.

Mr. Dujardin-Beaumetz has treated fifteen patients by the

new process. They increased in weight daily, but not so fast as the two above cases. Mr. Beaumetz gives only half the quantity of food given by Mr. Debove. He also modified the treatment, using a Faucher tube instead of a stiff sound. This tube, which is of an easy introduction, should be at least one centimeter (2-5 inch) in diameter; it should be wet with milk or water before introducing. In case the patient's stomach is very irritable, he injects the aliments immediately, in case it can tolerate previous washing. This is done with a solution of six grams of sodium sulphate in a liter of water.

From the ration proposed by Mr. Debove, he subtracts one egg, and adds, if there is no diarrhœa, one to two hundred grams of cod liver oil to begin with, then some spoonfuls of pepsine, then the food with chloride of sodium.

These results, although not very numerous, are encouraging enough to incite to new trials. Forced alimentation seems to offer important advantages which recommend it to practitioners. It can be applied to the last stage of phthisis, which was formerly left without available treatment. This method accordingly constitutes a precious means of treatment and marks a real progress. However, it is not devoid of all risks.

Thomas M. Denos saw, in a case of phthisis in its last stage, access of suffocation and vomiting, with reflux of the milk through the nostrils, and its introduction into the trachea, soon following on the forced ingestion of a liter of milk. Patient died of pneumonia in less than two days.

Notwithstanding this accident, Mr. Denos declares in favor of the forced alimentation of phthisical patients; recommending at the same time to proceed with prudence and gently, and introduce smaller doses in succession. He does not advise this treatment during febrile accesses. These advices should be carefully noted down.—F. LEPRÉVOST, in *Revue Médicale*, Feb. 4, 1882.

Selections.

INFANT FEEDING AND INFANT FOODS. (Continued from page 526, May number.)

We are assured that Nestle examines his materials very carefully, uses only bread made of the very best wheat, and the crust only; and that the starch is transformed into dextrine and sugar, under a pressure of a hundred atmospheres, by overheated steam. Thus Nestle's food is not only the very best nutriment for infants, but also for mothers who would fain raise a supply of milk in their own breasts, though it appears that that would be an uncalled-for desire in the face of all that is said about Nestle's food being a perfect substitute. All of which is respectfully submitted by Mr. Nestle's prompter, Prof. Lebert, or, perhaps, rather by Prof. Lebert's prompter, and most of which is untrue.

Many years ago, fifteen or more, when Nestle and Lebert discharged their pamphlets, advertisements, and agents upon America, I was induced to try and employ Nestle's food. I could not say that in children of a few months or a year it did any harm; on the contrary, it was fairly tolerated by most of them. I consented even to add my name to those of others recommending the article—the only time I ever did so in my life. A few years later, another advertisement appeared, which advised rather against the purchase of the former preparations, and recommended the recent modification. It was then, at last, that I resolved to scrutinize what I had recommended in good faith without any examination. I found, 1, that the contents of a number of boxes did not closely resemble each other; 2, that the main substance was made up of starch; 3, that even the cell membranes were not equally crushed, and a great many not

changed at all. It has also been found, and urged mainly by Eliza McDonogh (*Inaug. Diss.*, Zurich, 1877,) that the fragments of the microscopic elements exhibit the appearance of mechanical destruction, and not that brought about by heat. J. Miescher also states that he finds no essential difference between Nestle and common flour. Iodine yields instantly its blue reaction; the starch elements are partly free, partly still locked up in their cells. Some particles are albuminous; they turn yellow with iodine. In his experiments the watery extract was alkaline; in those of McDonogh it was acid, and contained but little dextrine. Cnyrim found in the boxes examined by him, sugar and dextrine to the amount of 45.56 per cent., but still 20.76 per cent. of starch was left without any change whatsoever. And the result of Jacobsen's examinations is that the contents of the boxes are not alike.

Gerber, also a large advertiser, and Nestle's Swiss rival in America, claims to have improved Nestle's flour by a difference in the process of preparation; the methods of which, however, are not communicated. His flour is wheat, which is again praised as the one article containing all the material required by the growing body in the smallest possible bulk. The same enumeration of the elements is made of an organic salt, and their mixture with organic substances is spoken of as if it were a new discovery. Potassium and phosphatic combinations, albuminates, carbon hydrates, fats, are whirled about in the most impressive and bewildering manner by every one who has a cheap article for sale at a high price. The greatest stress is always laid on the presence in the article offered for sale of all the chemical elements necessary for the building up of the body. But that presence alone, I repeat, is not sufficient; chemical figures and equivalents still enjoy too much respect and a sort of superstitious veneration. A thorough preparation preliminary to digestion is required, though the proportion of elements in a mixture were ever so appropriate. In regard to wheat, however, this proportion is not the very best at all, for wheat contains more starch than do barley or oatmeal.

In regard to both of them, Nestle and Gerber, Drs. Altherr and Lorch, in a little book entitled "On the Weighing of Infants

for the purpose of Determining the Nutritive Value of Woman's Milk, Cow's Milk, Nestle's and Gerber's Flours, and Liebig's Soup," Erlangen, 1877, has no great praise to bestow. Both are declared to be improper foods for the newly born and infants in the first few months; but they admit in the later months of life, when farinaceous foods of all kinds are well tolerated, they also may be given in the same manner. Similar observations have been made in the Child's Hospital, at Berne, Switzerland; and similar remarks are due to the Anglo-Saxon Food, which contains milk, some gluten, and plenty of starch, like the others.

In all of the twenty-two European infant foods examined by Eliza McDonogh, the starch was never changed to such a degree as to render the recognition of its source impossible. Wheat, corn, rye, barley, could always be recognized under the microscope. A number of the granules were broken up, it is true, but many more were intact. Thus, not even the very exact and uniform distribution of the starch is accomplished. All of them consist of baked flour of some kind, either by itself or mixed with sugar, milk, or salts. There are some, however—for instance, that of Hartenstein—consisting of wheat and oats, which has not even undergone the baking process.

Part of these European preparations have been naturalized with us. Some have made a great reputation, and probably money for many beneficent manufacturers, agents, and salesmen. But they are not alone in the field. Saul slew a thousand, David ten thousand. Europe has twenty odd infants' foods; America more than twice that number. Infants must no longer complain of lack of interest roused in their behalf.

Nature is the same all over; the nature of all natural things alike; that of wheat, oats, and manufacturer, wherever they be found. Thus the same results in regard to the composition of "infant foods" are reached here as in Europe. But a few days ago I was pleasantly surprised by the brief statements of Dr. E. Cutter, who, for *Gaillard's Medical Journal* (Jan., 1882), has undertaken the task of studying (microscopically) all the infant foods in our market. His researches, naturally, refer mainly to the proportion of gluten to starch. And some of his statements I shall refer to here, desiring to give them the greatest possible

publicity. I wish this brief article of his could be distributed in a hundred thousand copies, reprinted in every secular paper, read from every platform and pulpit of the land. For it is time that fraud should be stopped, and a nefarious trade suppressed.

Amongst the better preparations are Mellin's Food. It claims to be the only substitute for mother's milk, and not farinaceous. It is not the only substitute, but the starch is converted into dextrine, as in Horlick's Food.

Franklin Mills Wheat Flour contains more gluten than most of the rest. So does Arlington Wheat Meal, which is ground coarsely, and contains much gluten. Also Hawley's Liebig's Food, which contains wheat gluten cells, barley gluten cells, barley tegument, wheat starch, and cooked granular masses, which do not polarize light.

Mead's Malted Wheat Flour, a coarse flour or meal, which does not polarize light well; a good preparation.

Baby Sop is made of unhulled oats, malted and crushed, and contains all its elements; gluten cells of characteristic shape, and starch grains smaller than those of wheat.

As you descend the ladder, there is Keasbey & Mattison's Infants' Food. No gluten cells; consists of grape sugar and dextrine, and claims to contain alkaline phosphates.

Mother's Breast-milk Substitute is better than its ignorant advertisements; it contains gluten cells, bundles of wheat starch, barley starch, and gluten granules.

Imperial Granum, the salvator for invalids and the aged, an incomparable aliment for the growth and protection of infants and children, a superior nutriment in continued fevers, and a reliable remedial agent in all diseases of the stomach and intestines; that which makes strong bone and muscle; that which makes good flesh and blood; that which is easy of digestion, never constipating; that which is kind and friendly to the brain; and that which acts as a preventive of those intestinal disorders incidental to childhood—Imperial Granum food, which claims that the starch, impurities, and soluble matter are effectually excluded, and that the gluten only is retained, *shows no gluten cells under the microscope*, and is no better than it should be, no better than common flour, which, when fine and white, is de-

prived of three-fourths of its gluten, and no better than Savory & Moore's Food, which is also like common flour.—(E. Cutter.)

Ridge's Food is advertised as "a perfect food for infants." Ephraim Cutter tells you how perfect a food it is. It contains the beard of wheat, wheat starch mass, starch bundles, apparently of maize, caked mass of starch which does not polarize light, starch grains, starch granules, and small gluten granules. And he adds: "The proprietors must add gluten cells, at least in the proportion found in wheat or maize, to bring the product up to the standard of wheat flour."

Crosby's Brain and Nerve Food, which claims to be composed of vitalized phosphates from ox-brain and wheat-germ, consists almost exclusively of starch. There are no characteristic gluten cells, no nerve-fiber, no axis cylinder fiber, no ganglion, nor multipolar cell. The advertisement claims that the brain is that of the ox, but the label states that the brain is that of the fish. Label advertises 730 parts of starch in 1000, claims some gluten; if this exists, it is the granular gluten of common flour. There are 270 parts of so-called vitalized salts asserted to be in this food; that is, salts in connection with the organic substances named. If this be so, all the albuminoids in all the foods in the market are vitalized, also. There is but little gluten, if any, in this food. (E. Cutter.)

Blanchard's Glutena, 90 per cent. of starch, 10 of gluten, the reverse, exactly, of the claim made for the food.

Blair's Wheat-food, abundance of starch, no gluten.

Redmond's Cerealine, starch, very little gluten.

Durkee's Glutena, wheat, almost exclusively starch.

Farwell's Gluten Flour is advertised as "gluten left behind after the starch is blown out," contains starch, almost no gluten.

Victor's Baby Food is *said* to "resemble mother's milk closely," and *is* like cracker and biscuit ground up.

Taylor Brothers' Pure Bermuda Arrow-Root consists of potato starch, with an occasional addition of arrow-root.

Hubbell's Prepared Wheat, almost exclusively of starch.

No gluten is contained in *New York Food Company's* cold blast flour, barley flour, buckwheat flour, India wheat flour, Lost Nation wheat flour, common Minnesota flour, Hazleton flour,

Puritan flour, Patapsco flour, Underwood flour, fine granulated wheat flour.

Gluten Flour, New York Health Food Company, is common flour. The most superficial examination exhibits starch in abundance.

After all this, with all my heart I assent to E. S. Gaillard's editorial remarks, which are as follows:

"It is almost criminal that such great questions, affecting the health, and, therefore, the happiness and wealth of a nation, should be left to the ignorance of the miller and the baker; to the foolish customs of society, to the equally foolish test of the mere appearance of bread, and to the fashionable restaurants and hotels. Manufacturers of foods for the sick, and, above all, for infants, should be held to the strictest accountability. It is the highest duty of the physician to learn the facts in regard to meal foods, and to use his information for the benefit not only of the sick, but of the whole community." And experience shows, that as the committee report referred to expressed it last year, the community insists, with the utmost pertinacity, upon giving their babies, as soon as weaning time arrives, or before, such articles of food as they know nothing about. When an adult sits down to a meal and finds placed before him articles of food with which he is not familiar, he makes inquiries in regard to such articles before eating them. The baby, however, is credulously fed upon things with which the child, father, mother, or doctor has not the least familiarity; all of these foods which are sold in large quantities have a composition which is unknown to the public. When a manufacturer designs to say anything about his merchandise, it is to the effect that the food offered is the best in the market, that it is the proper thing and only thing for children and invalids of all ages, that the relation of the albuminous substances to carbo-hydrates is exactly correct, and that a package costs a certain amount of money. In regard to this subject the public appear to be smitten with absolute blindness. They insist upon forgetting that the man who offers for sale, and advertises at a very heavy expense, does so, as society is constituted, for his pecuniary advantage solely. To say that when the article offered is not good it will find no market, is deceiving

yourselves, experimenting on your baby, relying on the character of a single man or corporation, on the honesty or intelligence of the manufacturer's chemist, or his superintendent, or his workmen, on the nature and condition of the elements used in the composition of the article, and on ever so many influences, which can work before the manufactured article gets into the hands of the consumer. Why the sellers and advertisers of unknown compounds should be more trusted than those who raise and sell a simple article of food, such as milk, which is constantly adulterated, can hardly be perceived. Is it necessary to say that the factory furnace is lighted more in the interest of the proprietor than for the benefit of the public?

Still, in regard to the growing evil, which has assumed vast proportions, the profession is at fault, to a certain extent. There are but few who are aware of the inexpediency and sometimes danger attending the exclusive feeding of cow's milk, and look for substitutes. Examples of infants' thriving on almost any food are numerous; the public taste runs in the direction of the unknown; thus the responsibility of advice or assent is but a slight one; many of the foods in the market come in a pleasant form and convenient for use; thus the food-business firm certainly thrives. Professional men have become used to look upon the sale of patented foods as something quite unobjectionable. Those imbued with the strictest sense of ethics, who would not patent an invention, nor tolerate the fellowship of a professional man who so does, who frown upon patented medicines, because they are unknown and unknowable compounds, who object to reducing medical science to a mercenary standpoint, these very men forget their habits and principles when the question of patent-right and secrecy comes up in regard to patent foods. If I add, that many of the scientific journals of Europe, particularly those in Germany, dedicated to the study of children's diseases, are frequently used for the purpose of discussing the merits and effects of some new infant foods, it is only to show to what extent the evil had grown.

No profound thinking is required to appreciate the fact that a great many of the articles offered for sale are unmitigated frauds; and that a few are available compositions. But the very fact that

they are compositions, that everything organic may spoil, that every compound depends on too many circumstances which are apt to interfere with its uniform condition, and that when you rely on a compound, you rely at the same time on a proprietor, his foreman, his workman, his chemist, you feel that you are easily deceived or disappointed. Besides, for an article, the constituents of which you can purchase at a low price, you are taxed to an inordinate extent.

And why all this? Because cow's milk is found to be defective, when compared with mother's milk. These defects I have pointed out. It contains too much fat, and too much caseine, the latter of abnormal condition. Instead, however, of correcting the faults of milk, the latter is simply superseded and exchanged for something else. Is potato starch or even wheat, more similar to mother's milk, than is that of the cow? Now the proportions of fat and caseine can be regulated by the addition of water; but dilution is not the only function of the water added to the milk; the digestibility of the latter is also increased.

When albuminous material is subjected to artificial digestion with pepsin, and the process ceases, it recommences when more water is added. When the amount of water in the mixture is large, digestion will take place in a lower temperature than without it. Many digestive disorders in the living are due to lack of water, particularly in infants, who seldom or never are supplied with it in addition to what they obtain in their regular food. Infants who are apt to perspire much, either well or rachitic, who are kept in warm beds most of the time, who are exposed to summer heat, and lose much moisture through their skin, ought to be offered water a great many times in the course of the day. Particularly fat infants, who are mostly developing a rachitic or scrofulous disposition, ought to drink plenty of water. It accelerates tissue changes, and, therefore, animals which are to be fattened are habitually deprived of water. The rule then holds good in infant alimentation, that food, whatever it be, shall be given in considerable dilution.

But in the face of all the advantages water has, it is by itself not the proper dilution for the caseine of cow's milk. Some admixture must be found which is apt to overcome the dense coag-

ulations of caseine referred to before. The particles of caseine must not be permitted to remain in juxtaposition, but separated from each other to such an extent that coagulation in the stomach will take place in small loose flakes of the kind presented by curdling mother's milk. This object is accomplished by all farinaceous substances, without regard to their large or small percentage of starch; also by gum arabic and gelatine. Of the farinaceous substances, I have but two to recommend, barley and oatmeal. And for good reasons. The starch they contain is more easily dissolved and transformed by saliva than that found in wheat, which is the stock and trade of the infant-food manufacturers. And, moreover, there is less of it in them than in wheat.

The barley and oat-meal are the two substances I mostly employ, as their chemical constituents are nearly alike, with the exception of a large portion of fat in oat-meal, which is not found in barley. Barley water, or thinned and sweetened oatmeal gruel, may be given to the child, even at the breast. The indications for the use of one or the other lie in the condition of the infant. Where there is a decided tendency to constipation, I prefer oat-meal; where there is no such tendency, as usual, or perhaps even a tendency of the bowels to be loose, I employ barley. The "prepared" barley is a good preparation for older children only, for the whiter it is the larger is its percentage of starch. It is safest, as no mistake or deception can then take place, for every mother to grind the whole barley in a common coffee-grinder of her own. The younger the baby the more advisable does it become to boil whole barley for hours, to secure the contents of the bran. A teaspoonful of either is boiled in from five to eight ounces of water, with some salt, for twelve or fifteen minutes, the decoction to be quite thin for young infants, thicker for later months, and then strained through a linen cloth. Infants of four or six months are to have equal parts of this decoction (which ought to be made fresh for every meal), and of boiled cow's milk; some sugar besides. At an early age, the thin decoction, at a later, the milk ought to prevail in the mixture, which ought to be given at a temperature of 80–90°. The newly-born, which has to wait some days for his spring to open

for him, is best fed with a mixture of from four to (in summer) six parts of thin barley water, and one part of boiled milk. A baby of two months will take the same mixture in the proportion of from two or three to one.

I beg leave to quote a single author. Biedert, a conscientious worker, the author of competent contributions to medical science, and particularly to infant hygiene, himself the inventor of a cream mixture for the use of well and sick infants, expresses himself in the following manner in the very circular accompanying his preparations: "The first demand on a method of nourishing infants must be this—that the nutriment is tolerated by all infants, including the feeble and sick, in a manner similar to mother's milk. Now I have found that a food coming up to this requirement, must not contain more than 1 per cent. of caseine. Accordingly, cow's milk must be diluted with an indifferent thin decoction (oat-meal or barley.) In the beginning, the dilution must be in the proportion of 1 to 3 or 4; this admixture must be gradually reduced. This is the very mixture which surpasses all compounds thus far recommended, and all of the artificial preparations." And still in the face of this testimonial, than which I do not wish a more positive one, he invents a cream mixture.

Though my remarks must necessarily draw to an end, I must not close without at least one additional word in regard to some other constituent of infant food. Beside sugar, which is required both by taste and physiological necessities, the addition of common table-salt in moderate quantities both to cow's milk and to farinaceous substances is advisable.

The addition of chloride of sodium to the food is the more important the more the milk is mixed with a vegetable decoction. Carnivorous animals crave no salt; herbivorous, however, a great deal, although in their food the absolute amount of chlorine and sodium is as large as that of the former. They are easily drawn by hunters into fields and woods strewn with salt; and the instinct of mankind has early taught how to add more salt to herbaceous than to animal food.

We find that the craving for salt grows in proportion to the amount of potassium salts contained in the food. In that of herbivores there is twice or even four times as much potassa com-

pared with its chloride of sodium as in that of carnivores; potatoes, with their large amount of potassium, combined with chlorine and phosphoric and citric (pomic) acids, necessitate the addition of large quantities of chloride of sodium. In the food of carnivores, however, who eat whole animals, one equivalent of potassium is nearly balanced by one of sodium and one of chlorine.

Potassium salts and soda salts both exist in the blood, the former principally in the blood corpuscles, the latter entirely in the serum or watery part of the blood. There is chloride of potassium in both corpuscles and serum, but phosphate of potassium in the corpuscles alone. Now if there should ever be in the blood more phosphate of potassium than can be taken up by the corpuscles, it will be immediately decomposed by the chloride of sodium in the serum—chloride of potassium and phosphate of sodium are formed, and these are both rapidly eliminated by the kidneys, and pass away in the urine. By this means, chloride of sodium is carried away, and must be replaced; in other words, vegetable food requires the addition of a great deal of salt.

The substitution of cow's milk for woman's milk necessitates the addition of salt for a similar reason; for while 1000 parts of human milk contain only 0.70 chloride of potassium, 1000 parts of cow's milk contain 1.30.

There may be infants—I have been told of more cases than I have seen myself—who do not bear barley. Others may not bear oat-meal. If so, or if for some reason or other it is wise or whim to discontinue them, it must not be forgotten that, though feeding a breastless child without cow's milk, appears preposterous, feeding with cow's milk alone is dangerous. I do not permit it. I want an admixture at all events capable of diluting, as it were, the caseine. For that purpose, and for that alone, I formerly recommended gum arabic or gelatine. However, our knowledge of these substances has since improved. Prof. Uffelmann, in Rostock, had a little patient, otherwise healthy, who carried a gastric fistula. Through a large opening in his abdominal and stomach wall, he experimented on the child's digestion. Unmistakable and numerous observations taught him that both arabic gum and gelatine are not only emollient and soothing, but diretly nutritious. Thus the list of those substances which may be

added to boiled cow's milk, to make it available as the regular food for infants, is by no means small. They all come up to the requirements we look for in such substances. They must be perfectly simple and recognizable. They must be accessible, and for sale everywhere. The mode of preparing them must be perfectly simple and easy. They must be cheap.

They must be as nearly the substitute of mother's milk as an imitation can be like the original. They must be alike for throne and den, for Fifth Avenue and Mulberry Street, for the wet-nurses for the throne and for Fifth Avenue, come also from the dens and from Mulberry Street. It is not wise to forget that nature is republican in principal and democratic in practice. If too often there be no equality before a court of so-called justice, there is equality before that of physiological law.—*Med. News.* Feb. 18, 1882.

THE PROGNOSIS AND TREATMENT OF ANKLE-JOINT DISEASE,* By NEWTON M. SHAFFER, M. D., of New York, Attending Surgeon to the New York Orthapædic Dispensary and Hospital; Orthopædic Surgeon to St. Luke's Hospital.

In a previous lecture† I called your attention to two important conditions of the ankle-joint—viz.: chronic synovitis and chronic osteitis. Before beginning the consideration of treatment I will briefly call your attention to the prognosis of these lesions.

All joint diseases, and especially those under consideration, require the element of time in their treatment. They are well calculated to test the patience, the industry, the ingenuity, and the temper of the surgeon. In many instances the symptoms will be so unimportant in the minds of the parents, if the patient be a child, or in the consideration of the patient himself, if he be an adult, that complete relief will be looked for in a very short time. But do not let the apparently unimportant symptoms mis-

* A lecture delivered at the New York Orthopædic Dispensary and Hospital, November 10, 1881.

† The pathology, symptoms, and diagnosis of Ankle-Joint Disease. *Annals of Anatomy and Surgery*, vol. v., p. 1, January, 1882.

lead you. You may make it a rule to give an unfavorable prognosis in point of time, in certain chronic joint conditions, if the initial symptoms are apparently unimportant. In other words, the nearer the disease approximates an acute inflammation, the better is the prognosis. The more insidious the onset, the longer, as a rule, the disease will continue, and the more uncertain are we regarding the duration, the course, and the ultimate result. Do not attempt, therefore, to give a prognosis until you have duly weighed each symptom, and carefully studied each phase and feature of the history. I have sometimes been tempted to class chronic joint disease as one of the self-limiting lesions. Many of its clinical and pathological aspects lead to the conclusions so ably stated by Dr. Flint regarding phthisis.* In other words, all that we can do in certain cases of chronic joint-disease is to watch, support, and protect just as we do in certain acute diseases; only in many acute lesions the course of the disease is known, and in chronic joint lesions it is not known. Hence, I am very cautious in giving a prognosis in any chronic joint trouble. It is too much like guess-work; and he who guesses in orthopœdic surgery will come to grief. It is my plan to speak frankly to the patient or his friends, and to state plainly both the character of the lesion and the disadvantages under which the surgeon labors. My prognosis, therefore, is rather a description of the nature of the treatment and of the care necessary to obtain a good result. I do not believe that any one is justified in making an exact prognosis in chronic joint disease. I do believe, however, that, unless the case is a very bad one, a good result may be assured in childhood; and this is especially true of ankle-joint disease. But you must appreciate the effort necessary to secure this good result. I cannot speak any more definitely than this. Nor can I speak with any greater certainty until there is some more satisfactory method devised for dealing with the known pathological conditions to which I have called your attention. When we can successfully transform a chronic regressive metamorphosis into an acute reparative lesion we can make a much more favorable prognosis. But we cannot accom-

* See "Self Limitation in Cases f Phthisis," by Austin Flint, M. D. *Archives of Medicine*, vol. I., No. 3.

plish this transformation in all cases; indeed, with our present knowledge, we can succeed in only a very few.

Some surgeons seem to be afraid of producing anchylosis by immobilizing a joint in a state of chronic inflammation. I wish we could accomplish this end by so simple a procedure; but, anchylosis, in chronic arthritis, is not so easily produced. You may stiffen a joint more or less in a state of chronic inflammation, by an immobilizing apparatus, but you will very rarely produce anchylosis by this means. The disease has progressed, and it will progress in certain cases, notwithstanding every effort we may make. It would be a great victory for orthopædic surgery, could some procedure be devised, short of excision of the diseased articular ends, which would produce anchylosis or synostosis when necessary. In the acute joint lesions it is a very different matter. I have seen them rapidly anchylose under immobilization. And I may say that, as a rule, the effort of the surgeon in certain acute joint lesions is to *prevent* anchylosis. On the other hand, in certain forms of chronic articular disease, it is almost impossible to produce this result. In the latter case the condition does not attain a point where repair takes place until, in many instances, the epiphyseal structures are destroyed. The conditions met with are so perplexing and so little understood, and the indications are, apparently, so contradictory in some cases that it is not a matter of surprise that almost every surgeon should deem his own method of treatment the best, when, in reality, all are more or less faulty. We will try to-day to meet the indications as nearly as may be, simply saying that no treatment yet devised meets all the indications that the pathological conditions present.

If we find a distended capsule at the ankle-joint filled with fungous proliferating masses, the first question to be answered is: Does the disease involve the bone? For we should at once recognize the fact that however painless the lesion may be, however slight the inconvenience it occasions, the process is inherently destructive and progressive. Should we decide that the bone is free from disease or only slightly involved, we must at first make every effort to prevent a further progress of the proliferating fungoid masses.

Bear in mind, also, that there are various pathological states in that condition which, for brevity and convenience, I have classed under the general heading of chronic osteitis. Those most frequently met with are:

1. *Osteitis Fungosa or Granulosa*, either primary, *i. e.*, occurring in the epiphyseal structures, or secondary, as a sequence of a fungous degeneration of the synovial tissue.

2. *Caries Necrotica*, a condition in which the process of destruction is rapid, and carious bone is discharged, sometimes in quite large pieces.

3. *Simple Superficial Caries*, following periostitis, and finally:

4. *Caries Interna Caseosa*. The prognosis varies somewhat in all these conditions, as well as the treatment. I have spoken of the prognosis in caries fungosa, and I stop again to impress upon your minds that it is a very sluggish condition, with very insidious prodromata. It is accompanied sometimes by the atonic form of suppuration. You do not get laudable pus in this form of abscess. The discharge is profuse, but thin and ichorous, and filled with broken down tissue. In the necrotic caries the prognosis is more favorable; nature rapidly exfoliates the diseased bone, and the process is more like that which occurs in necrosis of the diaphyses of the long bones. In these cases, too, you will find more marked constitutional disturbance. The process, in other words, more nearly approaches the acute form of disease, and it runs a much shorter course, recovery, with anchylosis, in many instances, taking place. The superficial caries, properly recognized and treated, may also be called a favorable lesion, for it may not involve the articular surfaces. It may, however, become the caries necrotica, and total joint destruction may ensue. Suppuration of the more favorable type frequently accompanies this process, and the rule should be to open as early as possible, contrary to my usual custom. The caries interna caseosa is a form very difficult to recognize, especially in the early stage, and it is very apt, with caries fungosa, to be called tuberculosis of the joint. I do not believe, however, that it is possible to differentiate, clinically, between these two conditions. These two, the fungous or dry caries, and the caseous caries, are forms of disease that will principally engage our attention to-

day. The other forms of disease are those which are more readily recognized and more easily treated, and I will not attempt to discuss them in detail to-day. Nor can I attempt to describe all the chronic joint conditions which we may meet with. Neither can I discuss the various theories regarding their tubercular or non-tubercular origin. I shall rather strive to impress some facts upon your mind regarding the most neglected, and I think the least understood, of these lesions.

But there are those forms of chronic osteitis of the joints to which I have so briefly alluded; and, while in many instances the differential diagnosis is very difficult, especially in the early stage, you may be assured that the treatment to which I am about to call your attention will answer an excellent purpose in all the pathological states mentioned, whether you supplement your mechanical and systemic aids by incision, excision, etc., or merely pursue the method known as the "expectant plan."

There are many points concerning the etiology, pathology, symptoms and prognosis of chronic joint disease, that I should like to call to your attention before proceeding to the consideration of the treatment of ankle-joint disease; but it would be impossible to do the subject justice in one, or even several lectures. We have yet to consider knee, hip and spinal diseases before we close the discussion of these subjects, and you must pardon me if I defer some questions, and more especially those which are particularly suggested by other joint lesions, to a later date.

I showed you, upon the occasion of my previous lecture, two cases of ankle-joint disease. One of them illustrated the clinical aspects of chronic synovitis, the other of chronic osteitis. In the former we found the joint motions nearly normal; a bulging of the joint capsule, an elastic feeling, very suggestive of fluctuation, and an unimpaired walk and attitude. The other presented very different symptoms. The joint motions were very materially impaired by a very pronounced reflex muscular spasm; indeed, anchylosis was simulated by this peculiar condition. The joint outline was not obliterated, and there was no synovial bulging. The patient walked on his heel and limped very markedly; there was also a history of disturbed sleep. A difference in the condition of the muscles was also found in these two cases.

The patients with chronic synovitis presented a well-rounded calf, matching its fellow, while the one with chronic osteitis showed a smaller calf when compared with its mate. The former had neither reflex muscular spasm, nor a localized muscular atrophy, the latter illustrated both of these conditions. I cite these cases again, and once more call your attention to them, because we shall make them the basis of our remarks upon treatment, and shall have made for them apparatus to be applied in your presence during the present course.

But, before we speak of mechanical treatment, let us stop for a moment and discuss constitutional treatment.

There are certain indications which must be plain to all who have studied these cases, but it is very important that we should recognize that we have a regressive lesion—a retrograde rather than a reparative process—to deal with. We will suppose it to be the fungous synovitis or caries, and in all cases, not otherwise specified, we will refer to these conditions in our remarks. What remedy or remedies are there which will act specifically upon this fungoid degeneration. We must answer frankly that that there are none. Our very ignorance upon this subject drives us at once to the ground of all truly conservative surgeons —viz.: that of thorough, systemic treatment. We must make every effort to restore to nature its impaired reparative power; to bring to the local expression of a peculiar and little understood diathesis a greater plastic effort. But here again we are met by a state of affairs that requires much thought and study. Hygiene, exercise, diet, and many other things are to be thought of; but I know of no specific that I can recommend to you as applicable to all cases, or even one class of cases. Each case is a study, from the hereditary tendencies to the local condition of the joint, and it will require much thought, much study, much experience and observation to apply the remedies best adapted to a case of chronic joint disease. But do not neglect constitutional treatment, though you find that your pet remedy does not produce the impression it should; and, on the other hand, do not depend upon local or mechanical treatment alone.

Some cases are so very discouraging that you may almost be forced to admit, as I have done, that but little could be accom-

plished by constitutional aid, and that the disease was one which would run its course in spite of all treatment, and get well with a certain amount of joint destruction when the period of limitation was reached, or die in the effort. For in some instances, in spite of all you can do, the apparently simple chronic synovitis will progress and become, in addition, a chronic osteitis. Suppuration of the atonic form may follow, and lardaceous degeneration or tubercular meningitis may remove your patient. These very rarely follow in ankle-joint disease; the hip and spine are most likely to be complicated by these conditions. But one should always take them into account. All this may be very discouraging, I know, but we can only learn by looking at things as they are, not by discussing them from a fictitious standpoint. I have seen chronic joint disease recover with remarkable rapidity, so much so that in some cases I have doubted the correctness of my own diagnosis; but I know that we can, in the majority of instances, help nature very much, and by simply removing traumatism and by aiding nature, as indicated, we can secure the must excellent results, and render our patients, while under treatment, active and happy members of society—a condition of affairs not attained by those who ignore the benefits and curative influence of scientifically constructed apparatus.

The secret of successfully treating chronic joint disease, however, lies in its early recognition. Learn, therefore, to recognize these insidious lesions before great damage is done; not only that, teach the mothers and nurses that they may know, that many slight limps attributed to a tight shoe, or to habit, etc., mean something serious. Teach your families that many cases of "worms" and "indigestion" etc., have turned out to be humpback. Tell the mothers of the families you are called upon to attend that a swelled joint may be the commencement of a serious disease; and thus aid in the diffusion of knowledge, which, if properly interpreted, will save more children from deformity and lameness than all the apparatus ever devised for their relief.

The synovial membrane contains absorbents; it has a limited neural distribution, and its vascular supply is good. After the lesion of chronic synovitis has existed for some time, however,

its absorbent power is greatly interfered with. In simple hydrarthrosis, where there are unimportant changes in the synovial secretion, the absorbents still act, and one of our greatest hopes in the treatment of chronic synovitis is that the free surface of the membrane is not disintegrated by the fungous masses. Upon this basis, in certain cases, we make use of compression. For this purpose we use a silk, elastic anklet, compressed sponge or a firmly-applied flannel bandage, which latter should be frequently readjusted. We also use such remedies externally as may excite the absorbents, if there be any left, to greater action. Oleate of mercury, iodine, etc., are useful; so are blisters and friction by the hands. A gentle, but persistent surface massage seems to possess the power of assisting in exciting the absorbents. If the joint shows a higher temperature than normal, avoid the use of excitants and apply ice or other cooling applications, continued, if necessary, for a long time. Other remedies, such as the actual cautery, etc., suggest themselves; but they will occur to you as you study your cases, and read, if necessary, the authors whose contributions are so excellent. Study your entire armamentarium of internal remedies, and do not confine yourself for a long time to any one remedy. Iron, the hypophosphites, the various iodides, mercury, etc., etc., are indicated, depending on the actual condition, the hereditary influences and tendencies. I have known mercury and iodide of potassium to accomplish excellent and rapid cures in cases with a syphilitic taint. I have known it to fail in many other cases. Iron is almost always indicated, and a favorite prescription of mine is the plain tinct. ferri chlor., in large doses, combined with an equal quantity of glycerine. It seems in many cases to aid the plastic power more than any other preparation I have used. But I might add a long list of preparations with which you are familiar. I will again state, before commencing the subject of mechanical treatment, that each case is a study in itself, and that you must determine, by experiment, if necessary, the remedy or remedies necessary to aid you in the all-important element of mechanical support.

Whatever value traumatism may have as the cause of chronic joint disease, such as we have been speaking of to-day, there

can scarcely be anyone who doubts its relation to the progress of the lesion, when once it is established. It is, at least, my firm opinion, that when a joint or any of its essential structures become diseased, we should adopt means which will, without doubt, remove the element of constant traumatism, produced by locomotion, etc., and which will protect the vulnerable tissues under all circumstances. This support, at the same time, should not materially interfere with exercise and locomotion. How shall we apply this general principle to the conditions we have been studying to-day? Nature rarely presents a pathological condition without, at the same time suggesting, if not a remedy, indications for its use. We learn from the pathological state and a study of the clinical features, how to apply the means of relief. Let me recall what we have said about chronic synovitis, and see what it suggests.

In chronic synovitis there is almost normal use of the joint, with the fatigue after exercise. We should not, therefore, immobilize, for nature does not make the attempt. We should meet the indication, fatigue after exercise, and apply an apparatus which gives absolute joint protection.* In other words, when the patient is sitting, there need be nothing but protection against accidental traumatism; but when the patient walks this protection must be absolute, and the means by which it is to be obtained should act promptly and without the exercise of volition on the part of the patient. These, in brief, are the indications for the mechanical treatment of chronic synovitis of the ankle-joint.

Bear in mind, for it is very important, that you should always arrange your mechanical aids in treatment of chronic joint disease so that it shall always act independently of the patient's will. Make your protecting instrument, practically, part of the patient and part of the affected joint and limb; adjust it so that the patient can not move or step without making the support available; apply it so that whether sitting or standing, running or walking, whether the danger comes from the patient's own indiscretion or from some accidental cause, the joint—the vulner-

* See "The Mechanical Treatment of Synovitis of the Knee-Joint." By C. Fayette Taylor, M. D. *N. Y. Medical Journal*, July, 1873.

able point—is always protected. I have seen so many inefficient methods adopted for these cases, so many truly useless procedures, that I feel that I cannot speak too strongly upon this point. It is true that anything which gives partial support may produce temporary relief; but, when the patient feels this relief, he at once gives the affected joint more liberty, and being not fully, or, so to speak, not automatically protected, a speedy relapse ensues. Do not seem to do your work in orthopædic surgery, but always be sure that you accomplish all that is required when you use a support. Devise or prescribe the instrument yourself, and see that it is so constructed and applied that the principle involved is carried out. Of course, you must rely somewhat upon the discretion of the patient or his nurse; but you can, by study and effort, so construct and so apply your supports that their use may be reduced to the adherence to a few simple rules, and you can soon tell whether or not these rules are obeyed. If they are not, I would candidly advise you to dismiss the patient, and devote your time to some other and more profitable employment.

Mechanical aids are essential to the scientific treatment of chronic joint disease. They will prevent deformity in many cases, if they can do nothing more. In others, they will, where anchylosis is inevitable, permit you to elect the ultimate position of the joint. And you should always have at hand the facilities for adapting the instrument to the indications, and for making the instrument actually do the work required of it. You should master thoroughly the detail; you should always know more than the instrument maker, not necessarily about the manufacture of the apparatus, but about all other points. You should no more go to an instrument maker for advice than you would to a druggist for instruction. You should not send a patient to an instrument maker for treatment, any more than you would recommend a patient for treatment to a pharmacist. You should prescribe your instrument upon a rational basis, just as you would prescribe for an acute disease; and you should be able to tell the instrument maker, if the instrument is faulty, where the fault lies, or, better still, you should be able to correct the fault yourself. Upon this basis I know of no more satisfactory or pleasant work than orthopædic surgery. But, under any other condi-

tions, it is the most unsatisfactory kind of work. The profession must sooner or later appreciate this, and when they do, orthopædic surgery will be properly understood and appreciated, and that kind of talent will be attracted to it which will make its future brilliant. For there is more to be learned, I feel, in orthopædic surgery than in any other branch of surgery; and hence, there is more to be gained by those who diligently follow it, and intelligently study its problems.

To revert more particularly to chronic synovitis again, I said, and I again repeat it, do not immobilize the joint in chronic synovitis. If you do, the joint soon becomes stiff and useless, and the closely observing friends of the patient will inform you—and they will state a fact—that the joint is in a worse condition than before you applied the apparatus. Use of the joint in chronic synovial inflammation, therefore, is indicated. Motion, without pressure, is plainly demanded; in other words, we must avoid traumatic contact of the vulnerable surfaces. To accomplish this we must produce a certain amount of traction, but we must not prevent free movement.

There are no muscular contractions to overcome; there is no deformity of the joint to remove; there is no pain caused by interarticular pressure in chronic synovitis. The idea should be to produce just enough traction upon the joint to transfer the weight of the body to some other point, giving the joint full liberty when the pressure caused by the weight of the body is not present. Clinical experience teaches, in ankle-joint synovitis, that if we apply an apparatus that just prevents the foot from touching the floor when the patient walks, we place the joint in the best local condition for repair.

I may say here that I have been disappointed with all instruments that I have seen, that have been devised for the treatment of ankle-joint disease, whether synovial or osseous, that act upon the ankle-joint alone. In order to perfectly protect the ankle-joint we must limit more or less the movements of the knee-joint. If we wish to immobilize the ankle-joint in locomotion we must also control the knee. This fact we can, in some cases of synovial disease, ignore; but in the vast majority of cases we cannot ignore it; and hence, we must include the knee-joint in

our support. But where shall we obtain our counter support? If we are going to actually protect the ankle we must not depend on adhesive plaster and its attachment to the skin for our counter support. This is one of the fallacies that I have tried to combat. Adhesive plaster forms a very excellent and, indeed, the best means of applying direct traction to a distal part of the body, where we have a fixed point to pull against, as in hip disease, or knee disease, or even in ankle disease, if we apply our adhesive plaster to the parts beyond the ankle-joint. We cannot make a reliable fixed point with adhesive plaster. We must go to the perineum for our fixed point, to the tuber ischii, just as we do in hip disease; and we must make our support so that we can control the knee-joint if necessary, and actually support, protect, or apply traction to the ankle-joint as indicated. In chronic synovitis of the ankle-joint, and in chronic osteitis, also in some cases we can allow the patient to bend the knee when he sits down. As I will show you, there is a peculiar arrangement at the hip and knee in the apparatus I use, by which the patient can flex the knee-joint and the hip-joint as he sits down, and this mechanism locks automatically in the straight position when the patient stands erect or walks.

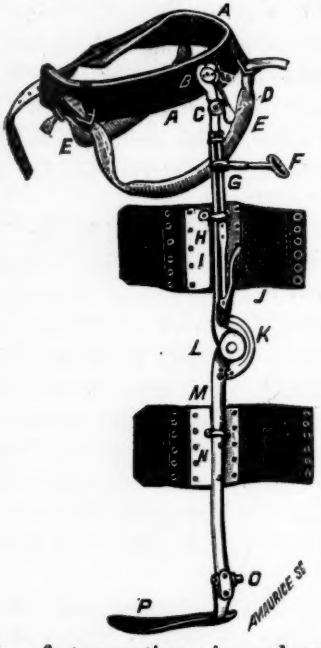
Here, gentlemen, is the instrument I use in ankle-joint disease; it looks formidable when removed from the patient, but when adjusted properly it is one of the most comfortable and efficient I have ever used. It is composed of six essential parts: (1) The pelvic band *A B*, which enables us to make the fixed perineal point of support *E E*.

(2) The automatic hip-joint movement *C*, which admits of flexion when the patient sits down, and which locks without aid when he stands. (3) The thigh part *G*, in which we place the extension rod. To this thigh-piece we attach a plate *H*, for loose lateral attachment to the thigh. (4) The knee-joint, with its automatic "snap" *J*, which always locks when the patient stands up and commences to walk. (5) The calf part *N*, which, like the thigh-piece, has a band and leather lacing to afford lateral attachment. (6) The ankle-joint *O*, with a worm and screw, which enables us to place the foot-piece *P* in any desirable antero-posterior position (see Fig. 1).

This instrument is modified from one introduced by Dr. Taylor, for chronic synovitis of the knee-joint. Dr. Taylor's instrument is pictured in his article on "The Mechanical Treatment of Synovitis of the Knee-Joint," already referred to. To it I have added the extension rod *C*, and the pelvic band *B*, the automatic joint at the hip *C*, and the worm and screw, controlled by a key at the ankle *O*. The joints at the hip and knee permit the patient to sit in an easy position, and when the patient stands they each lock automatically, and form a continuous splint. Protection, with traction, if desired, is thus always secured when the patient sits, and traction is always present when the patient stands.

The instrument is well adapted, in a mechanical sense, to the treatment of either chronic synovitis or chronic osteitis of the ankle-joint. The modifications necessary to meet the indications in these two conditions are made at the ankle-joint. For chronic synovitis we find just how much motion the patient should have, and then, by a "catch" in the sidepiece of the foot-plate (this is not shown in the plates) we limit the flexion and extension of the foot. We then apply the instrument, and generally without any adhesive plaster whatever. The instrument fits the contour of the limb, and we adjust it so that the foot-plate comes closely in contact with the sole of the foot, before the shoe is applied, and with the pelvic band just below the anterior superior spine of the ilium. Then lace the calf piece first; then apply the shoe over the foot-piece. You will be surprised, if you make the instrument fit, how easily the ordinary shoe goes over this foot-piece.

Then lace the shoe quite snugly; then lace the thigh-piece; finally buckle the pelvic band, and secure the perineal pads. Now make gentle traction, with the key just enough to carry the foot-piece, enclosed by the shoe, slightly away from the sole of



the foot. Place the patient on his feet. Almost the entire weight of the body falls on the tubera ischii when the affected ankle-joint is used in locomotion. The knee-joint is stiff, or not as you would wish, for, by removing a couple of screws, the automatic spring can be taken off. The ankle is protected against all ordinary traumatic influences, and the apparatus is almost as much a part of the patient as though he had been born with it. Whatever the patient does, the support is constantly acting, and no voluntary effort is needed to protect the inflamed joint surfaces. The risk of traumatism is reduced to a minimum, and you can now satisfactorily commence your systemic treatment. You can always control the amount of motion at the ankle-joint; and at night, if you wish to protect your patient against accidental traumatism, keep the instrument on and apply a bandage in place of the shoe, or adjust some simple form of ankle-joint splint. You ought to insist that the patient should never walk without the support; for if you permit any discretion in the matter, you might as well have no rules at all. If you say that the patient can walk without the support occasionally in the treatment of chronic synovitis, he will sooner or later make it his habit to reverse your rule, and wear the support occasionally. In chronic osteitis, however, there is very little necessity

for this rule. The comfort afforded by the apparatus so far exceeds the discomfort occasioned by its use that the patient will much prefer to wear the support.

In using this instrument for chronic osteitis of the ankle, you not only have a different pathological state from that found in chronic synovitis, but you must also make the modification necessary to meet it. You have no malposition of the joint in chronic synovitis, and hence, you can use the apparatus with more or less antero-posterior movement at the ankle. But in chronic osteitis we find reflex muscular spasm, malposition, either antero-posterior or lateral, pain and much greater difficulty in locomotion. Still, exercise in the open air is indicated, and joint protection is much more urgently demanded. How shall we make this instrument meet the indications?

Let me say here for your future guidance, in the treatment of chronic articular osteitis, that you should always adapt your apparatus exactly to the deformity, whatever it may be, and you must, by gradual and very gentle changes, restore the joint to the normal position, or that position, whatever it may be, which you seek. For ankle-joint osteitis I have introduced an antero-posterior worm and screw (*O*, Figs. 1 and 2). We can then, by a key, turn the foot-plate into a position of equinus or calcaneus, and so adapt it to the deformity; for there is no lateral malposition of the ankle-joint itself, and we can bend the side-bar to meet the secondary tarsal malpositions. After we have adapted the foot-piece and the side-bar to the actual deformity, we go through the same process as that just now described—viz.: We lace the calf-piece first, then adjust the shoe, then lace the thigh-piece, and lastly, arrange the pelvic band and perineal pads. We can reënforce this laced shoe with adhesive plaster, if necessary, however, and then make very thorough traction, applying considerable force, and in this way producing that peculiar avoidance of injurious contact which is so grateful to sufferers from chronic osteitis of the joints.

Patients who could not walk before the support is applied will generally walk well after this apparatus is properly adjusted, without any further aid. They do not need crutches or cane. It is only necessary to make the sound limb artificially longer

with a high-soled shoe, and advise care in locomotion at first. You do not have to urge these patients to walk; they soon become very active—as active, indeed, as children without joint disease.

Gradually you will change the position of the foot-plate, and the foot will follow it. In a few days you will see the ankle-joint in a good position, and the progress toward recovery fairly commenced. The instrument, as adjusted, but without the shoe or traction, is shown in Fig. 2.

Before giving you some practical demonstrations, I will briefly refer to some other matters: First, regarding abscesses: their presence does not interfere with the use of this support. Bad cases, with œdematous infiltration, sometimes improve very rapidly under its use, and you can very easily arrange the support so that it will not produce any discomfort. Second. If pain be very severe it is advisable to apply adhesive plaster, and to keep the patient in bed, where the proper local treatment can be carried out. Third. Give a few positive rules for the guidance of your patient, and insist upon their being obeyed.

The question of operative interference, excision, etc., is applicable to other joints as well as to the ankle, and I will consider these and other matters upon some subsequent occasion. I may say, however, that I have seen very few cases of ankle-joint disease where I deemed excision or amputation justifiable in a child. —*Annals of Anatomy and Surgery, May*, 1882.

PEMPHIGUS. By LEON SANDBERG, of Russia. Translated from the German by F. H. GEUTSCH, M.D., Chicago.

Pemphigus belongs, undoubtedly, to that class of skin diseases about whose nature we are thus far but little instructed. It manifests itself, on the one hand, in a great variety of forms and manifold complications, and on the other, by its rarity of occurence.

Whether this disease was known to the ancients or not, we find mentioned in the works of Hypocrates a febrile disease, under the name of febris pemphigoides, in the course of which pustules

were developed in the bucal cavity. There prevailed in all the ancient works, until the end of the last century, so much confusion upon this obscure disease, that we can accept them as of but little value. For the first lucid description of this disease we have to thank Lepois and Willan. The credit for its new classification belongs to Wichmann. Instead of the five classes of Savage, viz.: Pemphigus major, Castrensis, Helveticus, Indicus and Brasiliensis, he classified them as simply acute and chronic.

According to the French dermatologists, we have the classification, Pompholix congenital, solitaire, confluent, simultaneous, successive, acute chronic, pyretique, apyretique and herpes phlyctenoide. Hardy, in opposition, gives two principal forms, acute and chronic, but gives their different manners of invasion. Cazenaave sets up a new form, which differs from the ordinary chronic pemphigus in this, that separate pustules follow rapidly one upon the other, and with equal rapidity burst. In this form the pustules spread rapidly from the first point of invasion over the whole body. The pustules are small and not well filled, so that the coverings lie in folds. The red color of the contents of the pustule comes from the infected cuticle at its base. After the falling of the scab, a moist spot remains, which has no tendency to heal. These spots give off a fatty smell, and are very painful. This form received from Cazenaave the name of pemphigus foliaceus.

Whilst most dermatologists regard acute pemphigus as a distinct disease, Hebra teaches that every true pemphigus runs a chronic course. This question can only be settled by careful observation at the bedside. From the best information we can gather in regard to the so-called acute pemphigus, we see that it is not peculiar to children alone, but is found also, though rarely, in adults.

The statement of Bärensprung, that in the acute pemphigus, pustules form also upon the mucous membranes similar to those upon the skin, seems to be borne out by the facts in most cases, as in the case described by Coston, to which we will refer again later, in which this eruption was very well pronounced. This case can be cited as an instance of the occurrence of acute pemphigus, as the eruption was preceded by a distinct prodromic

stage of two days' duration, in the same manner as in the acute exanthemata. Later, Heraud observed three cases which ran an acute course, attended with high fever. Ulmer kept one of his cases, after it had run its acute course, under his eye for a considerable length of time, to see whether there would be any further manifestations of the disease, but failed to note any.

It is otherwise in regard to the contagious character of pemphigus.

The well-marked epidemics of pemphigus which have at times presented themselves stand in contradictory relation with the barren results of inoculation with the contents of the pemphigus pustule, so that we can hesitate to accept them alone as sufficient evidence of the contagious nature of the disease, as it is by many regarded. Also, in the case of Scharlan, in which the contents of the pustule should have shown contagious properties; viz.: that a number of persons who had been handling newly born children afflicted with the disease, also subsequently acquired an eruption, can still not be regarded as proof of its contagious nature. Notwithstanding the convincing evidence of the results of his inoculation by the pustulous matter, it still leaves a doubt whether it was not syphilis he was dealing with. Even though we know the course and various complications of this disease, we are still in the dark as to its etiology, and the light which a knowledge of the part taken by the internal organs might throw upon it.

Thus is the nature of this dangerous disease still obscure, in spite of the energy and labors of our most eminent dermatologists. In order to invite investigation into the nature of pemphigus, I send an account of a case of pemphigus foliaceus whose course seems particularly important.

A patient forty-two years old, badly nourished, suffered in his childhood from a scrofulous enlargement of the cervical glands, which at one time formed an abscess and required the use of the knife. In later years he suffered frequently from inflammation of the throat. The patient belonged to a sickly family, but in which there had never been any skin disease. His father died of lung disease, and his mother of apoplexy. Out of seven brothers and sisters six died; one brother living and well. The patient

was obliged to give up his trade, that of a shoemaker, because he could not endure the sedentary life, and has been for six years employed in a bone mill. No appearance of venereal disease. Excused from military duty as unfit. Was twice married, and had with the first wife six children, four of whom died in childhood; two are living and well. From the second marriage there are two children, both living and well.

In July, 1877, there appeared upon his limbs, without previous warning, a pustulous eruption, which in twenty-four hours spread over his entire body, when the pustules enlarged and became confluent; afterward ruptured, leaving moist and painful spots. At the time of his admission to the Julius hospital, October 1, 1877, his whole body was covered with the characteristic jagged shreds of skin of pemphigus. Over the whole surface of the skin were scattered flabby and sunken pustules, varying in size from a pea to a bean, filled with a milky fluid. On various parts of the body, particularly on the face and back, were crusts of eczema, under which lay the corium. Pustules also appeared in the external ear. The conjunctiva and mucous membrane were free from pustules, but lachrymation was profuse. Nothing abnormal found about the thoracic viscera or liver, or spleen. The assimilative powers were bad, with loss of appetite and diarrhœa. Under treatment with permanent baths of caustic potash, and arsenic internally, the patient improved. His weight increased from 50 to 64 kilograms. April 7, 1878, he was discharged convalescent.

During his stay in the hospital no albumen was found in the urine, but large quantities of phosphates.

Soon after leaving the hospital the pemphigus returned, with the same rapidity and intensity, covering the whole body, so that on June 27 he returned to the hospital. He was subjected to the permanent baths, and during the night Hebra's salve applied, and later penciled with pyrogallic acid. Internal administration of arsenic, morphia and hydrate of chloral to relieve pain. After an improvement in his general health, and of the skin disease, the patient again left the hospital, February 25, 1879.

Five weeks later the disease made its appearance once more, the patient being then engaged in the very arduous labor of

breaking stone. At this third appearance in the hospital the disease presented the same phase as in the first instance. The palpebral conjunctiva much inflamed, with epiphora; the outer ear excoriated and covered with pustules. Upon the forehead appeared circumscribed red spots denuded of epidermis; on the periphery of the spots were shreds of skin, as upon other parts of the body. The only remedy which proved efficacious in relieving the external symptoms was the permanent bath, twenty-four hours after using which flabby pustules appeared between those upon the epidermis. The nutrition sank considerably meanwhile. Diarrhœa alternated with constipation. The therapeutics same as for previous periods, with the exception that the pyrogallic acid seemed this time to have little effect. No fever. Heavy precipitate in the urine, but no albumen.

August 3, 1880. Patient felt somewhat better. Breast and back sparsely covered with pustules; the pustules already dried and burst, and the epidermis hanging in jagged shreds from the excoriated parts. The patient was kept all day in permanent bath, and at six P. M. was placed in bed, after the excoriated parts had been covered with oiled cloths. Appetite and sleep normal, but patient complains of continuous itching in the extremities.

August 17. An addition of corrosive sublimate to the bath had to be given up after two days, on account of the appearance of salivation. The urine, which was examined every six days, was found free of albumen, rich in urates, and of brownish yellow color.

In the latter part of October the appetite failed, and vomiting began.

November 3, the patient experienced several chills, and pneumonia of the left lung.

November 7. Another severe chill. The temperature varied between 39 and 40.3 C. until the third stage of the pneumonia, November 20.

November 16, a new outbreak of pustules was noticed. On the lower part of the breast and the entire surface of the abdomen the epidermis detached itself in patches as large as the hand, formed by the confluence of mucous pustules, and thus exposing

the corium, which, together with the remaining contents of the pustules, formed yellow, bad smelling scabs. The same condition of the back rendered the recumbent position very painful.

November 20. With the decline of the fever, the skin of the breast and back began to assume its normal appearance. No more pustules appeared on the back, but upon the ocular conjunctiva of the left eye pustules as large as a pea developed themselves, which, on opening or closing the eye, acted like a foreign body. Patient was once more placed in the permanent bath. His appetite improved, and weight increased from 42.5 to 61 kilograms.

About the end of January, 1881, a new eruption made its appearance, attended by fever; the temperature at times rising as high as 39.7 C.

At this time the patient presented a typical case of pemphigus foliaceus. Upon the whole body were numerous pustules, some filled with pus and others with serum, and covered with scales of epidermis. Upon the nates were cracks and chaps which were easily caused to bleed, and which made the dorsal decubitus very painful. In contrast with the rest of the body, the palms of the hands and the soles of the feet presented a normal appearance, and remained free from eruption during the whole course of the disease. In March the patient began to complain of pains in the mouth and of loss of appetite, and rapidly lost flesh. On inspection of the bucal cavity, we found the tongue red and denuded of the epithelial coat, and a crucial-shaped coating on its surface, and the margins also coated. Upon the point of the tongue were three pustules, the size of a pea, and filled with a transparent liquid, each of which pustules was surrounded by a number of minute ones of the same character. The gums and jaws were normal in appearance. The skin began to wear a better appearance. The breast and upper extremities were almost free of eruption. The back and lower extremities also showed no pustules, but scales of epidermis similar to those resulting from ruptured blisters, and which were arranged in circular form upon the body. Upon the hairy scalp and upon both ears were attached with dried pus the same sort of scales, forming with the hair a

white crust, and giving the appearance of flour having been strown over the scabs or crusts.

In April the treatment by permanent baths had to be discontinued, on account of the aversion of the patient to them. After two months, in consequence of lying with dressed limbs, a slight contraction of the knee joints appeared. Forcible extension was not applied, on account of the severe pain produced, but passive motion was freely employed.

In October the condition of the patient was worse. Severe pains in the head, and tearing and drawing pains in the right hip joint. The inguinal glands became swollen, but not tender on pressure. Over the lower portion of the abdomen, as well as upon the right thigh, many new pustules appeared. Those upon the thigh soon became confluent. The epidermis became detached from the entire surface of the thigh and the upper third of the leg. The contents of the pustules, at first serous, assumed the character of pus. After the appearance of the pains in the hip, the temperature rose, the breathing became difficult, and, owing to the debility of the patient, expectoration impossible. In the beginning of November there appeared, attended with severe burning pains, new pustules upon the left lower extremity, which ran the same course as those upon the right thigh. The knees on both sides were contracted at right angles. Shortly before death, the patient began to complain of pains in the left breast. Percussion showed a region of dullness of two fingers breadth in the posterior lower portion of the left lung. Auscultation revealed pleuritic friction sounds. The heart impulse grew weaker, and on November 10 death ensued from paralysis of the heart.

Post-mortem examination one day after death revealed the following, viz.: Muscles dark and dry. Adipose membrane much reduced. In the left heart, clots of dark blood in large quantities; same in the right; no ante-mortem clots; valves normal. Brown coloration of the muscles of the heart, and reduced in quantity; left endocardium of light color. Anterior part of right lung normal, but posterior part of upper half of same partially solidified; patches of ecchymosis upon the pleura. Hyperæmia of the trachæa and larger bronchial tubes. There was less infiltration of the left lung than of the right one. Considerable

deposits of fibrin upon the pleura; in the upper lobe a deposit of tubercles. Bronchial mucous membrane on this side less hyperæmic than upon the other. Stomach distended, and upon the lesser curvature a simple ulcer, with a swollen base, seemed to be in process of healing; upon the opposite side were cicatrices of old ulcers. The subserous coat of the small intestines much injected; the mesentery light-colored and swollen, with thickening of the mesocolon. The mesenteric glands between colon and ilium were enlarged to the size of a pigeon's egg, and cheesy. Slight erosion of the lower part of the large intestine; over the valvula Bauhini ulcerative changes. Spleen large and white, and few malpigian bodies; liver enlarged, with fatty infiltration of its borders. Right kidney normal in size; left one enlarged with light-colored cortical substance.

Microscopical examination of the brain, spinal cord and sympathetic revealed nothing abnormal.

To recapitulate: We have here to deal with a delicate man of forty-two years, who was scrofulous in his childhood, and who lived under bad influences. His sickness began in July, 1877, and caused his death four years afterward.

With the most patients, we find with this disease a tendency to exhaustion and general disturbance of the digestive apparatus. The intensity and extent of the skin affections are variable, and at times the patients experience intervals of almost entire freedom from them. While in most cases the eruption is not attended with fever, yet in some cases it is preceded by high fever.

Ten days before death, this patient had marked enlargement of the inguinal glands, attended with severe pain in the right hip joint, and also high fever of a remittent type, which until death remained as high as 39 to 40.3 C., the remissions amounting, some days, to 3° C. In this case, every sign of kidney disease, which in the etiology of pemphigus with the older authors played so important a *rôle*, was wanting; also those signs of nervous disturbance to which, in the last decade, the origin of pemphigus has so often been attributed, were wanting. Still, we find in this case some moments, even though they appear to be merely coincident or accidental, which we may perhaps point to as the origin of the disease. There is no doubt that the constitution

of the individual, in this disease, as in many others, has much to do with the origin of the disease. Most victims of this disease are broken-down, debilitated individuals, who live under bad influences, and who are frequently exposed to wet and cold.—*Münchener Medicinisehe Wochenschrift.*

To make a differential diagnosis between the inter-costal neuralgias and pleural or pulmonary disease, observe two facts: The neuralgias are associated not only with pain, but also with tenderness on pressure; the pulmonary processes by pain alone. The second fact is that neuralgias are unattended by fever; the reverse prevails in the opposite conditions.—*E. T. Bruen, in Pocket-Book of Phys. Diagnosis.*

Items.

THE TONGA TRADE MARK LITIGATION.

The suit of the English firm of Allen & Hanburys *v.* Parke Davis & Co., of Detroit, has abruptly terminated by the plaintiffs, on their own motion, obtaining an order of court to dismiss the bill of complaint and assuming the costs of suit themselves.

This affair has ended all too soon for the plucky Detroit firm, who hoped to place a decision on record in the United States court as to whether a firm has the right to appropriate and monopolize by trade mark the common name of an article, and thus exclude others from its manufacture, effectually destroying competition.

The compound known as Tonga having been introduced to the profession by such distinguished authority as Drs. Murrell, Ringer and others, Parke Davis & Co. cast about for a supply of the article for manufacture. Its habitat being in the Fiji Islands, some seven thousand miles southwest of San Francisco, a special agent sent by them secured in six months a large supply of the drug. In accordance with their custom, they published to the trade and medical profession what information they have been able to secure, and supplied to hospitals and many practitioners sample quantities for trial.

As a result of this enterprise, a demand sprang up for the drug, which attracted the notice of the English firm.

Supposing a simple warning sufficient to induce the American firm to relinquish the fruit of its labor and enterprise, they politely informed them that the name "Tonga" and the combination of drugs known by that name were the special property of Allen &

Hanburys under a registered trade mark, and that all trade in the article except through them should now cease.

Parke Davis & Co. refused to entertain any such demand, and the English firm, after failure to obtain letters patent in the United States, brought suit against them in the United States court for infringement of trade mark with the above result.

MORTALITY in the chief cities of the United States for the year 1881: Compiled from National Board of Health Bulletin.

	Population.	Mortality per 1,000.
Portland, Me	33,810	18.5
Concord, N. H	13,838	17.9
Burlington, Vt	11,364	18.1
Boston, Mass	362,535	24.1
Lowell, Mass	59,485	21.6
Worcester, Mass	58,295	19.3
Providence, R. I	104,857	20.2
New Haven, Conn	62,882	20.4
New York, N. Y	1,206,577	31.9
Brooklyn, N. Y	566,689	25.2
Buffalo, N. Y	155,137	25.6
Newark, N. J	136,409	25.5
Philadelphia, Pa	846,980	28.6
Pittsburgh, Pa	156,381	28.6
Wilmington, Del	42,499	31.0
Dist. Columbia	180,000	24.8
Richmond, Va	63,803	32.1
Wheeling, W. Va	31,266	22.7
Augusta Ga	23,023	31.6
Atlanta, Ga	37,421	25.7
Key West, Fla	9,890	24.7
Mobile, Ala	31,205	31.0
Vicksburg, Miss	11,814	30.8
New Orleans, La	216,140	29.6
Galveston, Tex	22,253	30.9
Nashville, Tenn	43,461	26.4
Louisville, Ky	123,645	22.2
Cincinnati, Ohio	255,708	24.3
Cleveland, Ohio	160,140	23.5
Indianapolis, Ind	75,074	21.1
Chicago, Ill	503,304	27.2
Milwaukee, Wis	115,578	23.2
St. Paul, Minn	41,498	23.4
E. Saginaw, Mich	19,016	15.0
Dubuque, Iowa	22,254	12.5
St. Louis, Mo	350,000	23.9
Omaha, Neb	30,508	17.1
Salt Lake City, Utah	20,768	27.9
San Francisco, Cal	233,956	17.6
Average		24.7

Mean death-rate from the following diseases per 1,000:

Accidents	0.80
Consumption	3.23
Croup	0.50
Diarrhœal diseases	2.49
Diphtheria	1.01
Typhoid fever	0.65
Scarlet fever	0.67
Pneumonia	1.52
Bronchitis, acute	0.57
Small-pox	0.45

Chicago.—The registrar reports a total of 1,178 deaths during the month of January, of which there were 24 from croup; 46 from diphtheria; 13 from cerebro-spinal fever; 30 from scarlet fever; 62 from typhoid fever; 133 from small-pox; 120 from phthisis; 210 from acute lung diseases, etc.

RICORDIANA.—The French doctor is fond of flavoring his professional work and reading with literary digressions and witty sayings. A surgeon or physician to be really great in Paris must utter an occasional epigram. There are amusing anecdotes told of every prominent Parisian medical man. There exists a collection of these "morceaux choisis." To judge from the collection, Ricord is the greatest man in Paris. The book is full of stories about him. Here are some "Ricordiana:"

"Ricord is a savant whose researches have rectified an important point in mythology. He has demonstrated that it was not Vulcan, but Mercury whom Venus should marry."

"Some one asked Ricord if small-pox and the other were of the same family. 'They are sisters,' said he, 'but not of the same bed.'"

"'The condom,' says Ricord, 'is a cuirass against pleasure and a cob-web against danger.'"

"At the Convent of St. Jean de Latran there is preserved a famous relic in the shape of a serrated ring used by a mediæval saint for the discipline of the rebellious flesh. Ricord was one day asked by a young lady, an *ingenue de salon*, what was the character of this relic, made doubly famous by the witticisms of Voltaire. Ricord was somewhat embarrassed at first. 'Ah, yes;' replied he, 'it is a crown of thorns.'"

CLINICS.

MONDAY.

Eye and Ear Infirmary—1.15 p. m., Otological, by Prof. Jones; 2.15 p. m., Ophthalmological, by Prof. Hotz.
Mercy Hospital—2 p. m., Medical, Profs. Hollister and Quine.
Rush Medical College—3 p. m., Dermatological and Venereal, by Prof. Hyde.
Woman's Medical College—2 p. m., Dermatological and Venereal, by Prof. Maynard.

TUESDAY.

Cook Co. Hospital—2 to 4 p. m., Medical and Surgical Clinics.
Mercy Hospital—2 p. m., Surgical Clinic, by Prof. Andrews.
Woman's Medical College—10 a. m., Prof. Ingals.

WEDNESDAY.

Chicago Medical College—2 p. m., Eye and Ear, by Prof. Jones.
Rush Medical College—2 p. m., Medical, by Dr. Bridge; 3 p. m., Ophthalmological and Otological, by Prof. Holmes; 3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.
Woman's Medical College—2 p. m., Eye and Ear, by Dr. W. T. Montgomery.
Eye and Ear Infirmary—2.30 p. m., Dr. E. J. Gardiner.

THURSDAY.

Chicago Medical College—2 p.m., Gynæcological, Prof. Dudley.
Rush Medical College—2 p. m., Diseases of Children, by Dr. Knox; 3 p. m., Diseases of the Nervous System, by Prof. Lyman.
Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.
Woman's Medical College—3 p. m., Surgical, by Prof. Owens.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics, by Profs. J. H. Hollister and R. N. Isham.
Mercy Hospital—2 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.
Mercy Hospital—2 p. m., Surgical Clinic, by Prof. Andrews.
Chicago Medical College—3 p. m., Neurological, Prof. Jewell.
Woman's Medical College—2 p. m., Gynæcological, by Prof. Stevenson.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.